Jeffrey D. Rimer

University of Houston, Department of Chemical and Biomolecular Engineering
4726 Calhoun Rd., Houston, TX 77204 : (713) 743-4131 : jrimer@central.uh.edu : www.chee.uh.edu/faculty/rimer

EDUCATION

2001 – 2007 **Ph.D. Chemical Engineering**
University of Delaware, Department of Chemical Engineering **Newark, DE**
Thesis: "*Self-assembly of silica nanoparticles and their role in the mechanism of silicalite-1 crystallization*" with advisors Dionisios G. Vlachos and Raul F. Lobo

1999 – 2001 **B.S. Chemical Engineering,** *Summa Cum Laude*
Washington University in St. Louis **St. Louis, MO**

1996 – 1999 **B.S. Chemistry,** *Magna Cum Laude*, minor in history
Allegheny College **Meadville, PA**

RESEARCH EXPERIENCE

2018 – Present **University of Houston, Professor** **Houston, TX**
2018 – Present **Abraham E. Dukler Endowed Chair**
2015 – 2018 **University of Houston, Associate Professor**
2012 – 2018 **Ernest J. and Barbara M. Henley Chemical Engineering College Professorship**
2009 – 2015 **University of Houston, Assistant Professor**
Department of Chemical and Biomolecular Engineering

Department of Chemistry (Joint Appointment)

- Rational Design of Porous Catalysts: novel approaches are used to tailor zeolite properties (size, shape, composition). We pioneered *in situ* solvothermal AFM and use this technique to examine surface growth in real time and quantify interfacial interactions. We introduced the use of zeolite growth modifiers to control crystal habit and exploit this method for the rational design of catalysts with improved performance in methane and methanol upgrading to chemicals and fuels.
- Crystal Engineering of Biomaterials: we develop novel therapeutics for pathological and infectious diseases using crystal growth inhibitors, such as *de novo* peptides, to arrest crystal growth. Research initiatives examine crystallization with near-molecular and macroscopic methods aimed to quantify inhibitor-crystal interactions and binding modes. In collaboration with medical and academic institutions, we explore growth inhibition as a viable approach to design drugs.

2007 – 2009 **New York University, Postdoctoral Fellow** **New York, NY**
Department of Chemistry, Molecular Design Institute (Advisor: Michael D. Ward)

- Investigated the mechanism of calcium oxalate and L-cystine kidney stone formation with Prof. Michael Ward and collaborators at the Medical College of Wisconsin and NYU Medical Center.
- Patented a viable therapeutic drug for L-cystine stone disease, which dramatically reduces *in vitro* crystal growth rates and yield, and selectively alters crystal habit.
- Explored the dynamics of protein-protein and protein-crystal interactions at crystal surfaces using AFM force spectroscopy and AFM tips with covalently immobilized urinary proteins.
- Probed the influence of growth inhibitors using real time *in situ* AFM studies of crystal growth.

2001 – 2007 **University of Delaware, Doctoral Research** **Newark, DE**
Department of Chemical Engineering, Center for Catalytic Science and Technology

- Analyzed the structural evolution of silica nanoparticles during zeolite silicalite-1 nucleation with small-angle X-ray scattering (SAXS) and small-angle neutron scattering (SANS).

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- Implemented thermodynamic models to elucidate the physical basis for the self-assembly and the colloidal stability of silica nanoparticles formed during the initial stages of silicalite-1 crystallization in collaboration with UC Davis (Prof. Alexandra Navrotsky) to perform microcalorimetry studies.

Summer 1999 **University of Pittsburgh, NSF REU Program** **Pittsburgh, PA**
Department of Chemistry

- Developed novel synthetic methods in *Flourous Biphasic Catalysis* using radical-based tin hydride reactions under the advisement of Dennis P. Curran in the organic chemistry department.

1998 – 1999 **Allegheny College, Undergraduate Research** **Meadville, PA**
Department of Chemistry

- Designed reaction pathways towards the synthesis of the organic compound (•) Laurene.

INDUSTRIAL EXPERIENCE

Spring 2007 **DuPont Corporation and University of Delaware** **Wilmington, DE**

- Investigated the rheology and kinetics of curing polymer nanocomposites with Prof. Norman Wagner (U. Delaware) and in collaboration with Ed Stancik and Bryan Sauer (DuPont Experimental Station).

Summer 2000 **Bayer Corporation, Pre-Professional Program** **Pittsburgh, PA**

- Assisted the *Engineering Analysis* group within Bayer's corporate engineering department to monitor capital spending and cycle dates for all domestic projects.

HONORS AND AWARDS

2021 **National Academy of Inventors**, Senior Member

2020 **Edith and Peter O'Donnell Award in Engineering**, The Academy of Medicine, Engineering & Science of Texas (TAMEST)

2019 **Abraham E. Dukler Endowed Chair**, University of Houston

2018 **Norman Hackerman Award in Chemical Research**, The Welch Foundation

2018 Class of Influential Researchers, Industrial & Engineering Chemistry Research (ACS Publishing)

Emerging Investigators, Molecular Systems Design & Engineering (RSC Publishing)

2017 **FRI/John G. Kunesh Award**, AIChE Separations Division

Netherlands Center for Multiscale Catalytic Energy Conversion Lectureship Award, Inaugural Recipient

Best Paper: AIChE Meeting, Division Plenary: Gerhold and Kunesh Awards on Separations

2016 **Mellichamp Emerging Leader Lecture**, Inaugural Speaker, University of California at Santa Barbara

Owens Corning Early Career Award, American Institute of Chemical Engineers

Joe W. Hightower Award, American Chemical Society Greater Houston Section

Teaching Excellence Award, Cullen College of Engineering

Up and Coming Perspective, Chemistry of Materials (ACS Publishing)

2015 **Teaching Excellence Award,** University of Houston

2014 **Award for Excellence in Research and Scholarship,** University of Houston

Early Faculty Award for Mentoring Undergraduate Research, University of Houston

The Catalyst Review, Selected for "Movers & Shakers"

Provost Certificate of Excellence, University of Houston

2013 **DOE Workshop on Particle Mediated Growth,** Invited Participant, Berkeley, CA

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Junior Faculty Research Excellence Award, Cullen College of Engineering

2012 **ERDT Visiting Professor of Chemical Engineering**, University of the Philippines

National Science Foundation CAREER Award

Ernest J. and Barbara M. Henley Chemical Engineering College Professorship

ACS-PRF Doctoral New Investigator Award

2011 **Oak Ridge Associated Universities Travel Award**

American Institute of Chemical Engineering Honorarium, 2011 Annual Meeting Invited Speaker

2010 **National Science Foundation BRIGE Award**

2009 **New Faculty Award**, University of Houston

2006 **Materials Computation Center (MCC) Travel Grant**, CECAM workshop in Lyon, France

Poster Award Contest Winner, Philadelphia Catalysis Club Meeting in Wilmington, DE

Gordon Research Conference Student Travel Award, Ventura, CA

2005 **Robert L. Pigford Teaching Assistant Award**, University of Delaware

Kokes Student Travel Award, 19th North American Catalysis Society Meeting in Philadelphia, PA

Gordon Research Conference Student Travel Award, South Hadley, MA

2002 **Honorable Mention, National Science Foundation Graduate Fellowship**, University of Delaware

2001 **Dual Degree Chemical Engineering Award**, Washington University in St. Louis

Harold P. Brown Fellowship (1999–2001), Washington University in St. Louis (full tuition plus stipend)

1999 **NSF Research Experience for Undergraduates Fellowship**, University of Pittsburgh

Elected to Phi Beta Kappa Society, Allegheny College

Sandra Doane Turk Award, Allegheny College

Most Outstanding Junior Chemist Award, Allegheny College

Presidential Honor Scholarship (1996 – 1999), Allegheny College

Distinguished Alden Scholar (1996–1999), Allegheny College

1998 **ACS Polymer Division Award for Outstanding Performance in Organic Chemistry,** Allegheny College

1997 **American Chemical Society (ACS) Most Outstanding Freshman Chemistry Student**, Allegheny College

PUBLICATIONS : REFEREED JOURNALS

107. Lu, P., Ghosh, S., Dorneles de Mello, M., Kamaluddin, H.S., Li, X., Kumar, G., Duan, X., Abeykoon, M., Boscoboinik, J.A., Qi, L, Dai, D., Al-Thabaiti, S., Narasimharao, K., Khan, Z., Rimer, J.D., Bell, A.T., Bhan, A., Dauenhauer, P.J., Mkhoyan, K.A., Tsapatsis, M., *Few-unit-cell MFI zeolite synthesized using a simple di-quaternary ammonium structure directing agent*, (2021) Submitted

106. Li, R., Elliott, W.A., Clark, R.J., Sutjianto, J.G., Rioux, R.M., Palmer, J.C., Rimer, J.D., *Molecular Modification of One-Dimensional Zeolites: A Kinetically-Controlled Phenomenon*, (2021) Submitted

105. Alamani, B.G., Gale, J.D., Rimer, J.D., *Zinc Ions Modify Calcium Oxalate Growth by Transformation of Crystal Surface Termination*, **Cryst. Growth Des.** (2021) Under Revision

104. Geng, X., Sosa, R.D., Reynolds, M.A., Conrad, J.C., Rimer, J.D., *Alginate Operates as a Dual Inhibitor of Barite Nucleation and Crystal Growth*, **Mol. Syst. Des. Eng.** (2021) In Press

103. Jain, R., Chawla, A., Linares, N., Garcia-Martinez, J., Rimer, J.D., *Spontaneous Pillaring of Pentasil Zeolites*, **Adv. Mater.** (2021) In Press

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102. Le, T.T., Qin, W., Nikolopoulos, N., Fu, D., Patton, M.D., Weiland, C., Bare, S.R., Weckhuysen, B.M., Rimer, J.D., *Elemental Zoning Enhances Mass Transport in Zeolite Catalysts*, (2021) Submitted

101. Bozhilov, K.N., Le, T.T., Zin, Z., Terlier, T., Palcic, A., Rimer, J.D., Valtchev, V., *Time-resolved Dissolution Elucidates the Mechanism of Zeolite MFI Crystallization*, **Sci. Adv.** (2021) In Press

100. Yu, S., Kumar, M., Choi, H.H., Kim, I.W., Rimer, J.D., Kim, T.J., *Differential Cellular Internalization and Cytotoxicity of Synthetic Zeolites in Human Lung Fibroblasts*, (2021) Submitted

99. Susman, M.D., Chinta, S., Rimer, J.D., *High-index (Ni,Mg)O Crystallization During Molten Salt Synthesis*, **Chem. Mater.** (2021) In Press

*Artwork selected for supplementary cover

98. Liang, Y., Jacobson, A.J., Rimer, J.D., *Strontium Functions as a Dual Accelerant and Structure-Directing Agent of Chabazite Crystallization*, **ACS Mater. Lett.** 3 (2021) 187-192

97. Zhao, X., Susman, M.D., Rimer, J.D., Bollini, P., *Tuning Selectivity in Nickel Oxide-Catalyzed Oxidative Dehydrogenation of Ethane through Control over Non-Stoichiometric Oxygen Density*, **Catal. Sci. Technol.** 11 (2021) 531-541

96. Zhao, X., Susman, M.D., Rimer, J.D., Bollini, P., *Synthesis, Structure and Catalytic Properties of Faceted Oxide Crystals*, **ChemCatChem** 13 (2021), 6-27. Invited Submission

95. Sosa, R.D., Geng, X., Agarwal, A., Palmer, J.C., Conrad, J.C., Reynolds, M.A., Rimer, J.D., *Acidic Polysaccharides as Green Alternatives for Barite Scale Dissolution*, **ACS. Appl. Mater. Interface** 12 (2020) 55434-55443.

94. Kim, D., Moore, J., McCoy, C.P., Irwin, N.J., Rimer, J.D., *Engaging a Battle on Two Fronts: Dual Role of Polyphosphates as Potent Inhibitors of Struvite Nucleation and Crystal Growth*, **Chem. Mater.** 32 (2020) 8672-8682.

93. Ma, W., Balta, V.A., West, R., Newlin, K.N., Miljanić, O.Š., Sullivan, D.J., Vekilov, P.G., Rimer, J.D., *Artemisinins Deploy a Dual Mode of Therapeutic Action against Plasmodium Falciparum*, **J. Biol. Chem.** 296 (2020) 100123.

92. Zhou, Y., Thirumalai, H., Smith, S.K., Whitmire, K.H., Liu, J., Frenkel, A.I., Grabow, L.C., Rimer, J.D., *Ethylene Dehydroaromatization over Ga-ZSM-5 Catalysts: Nature and Role of Gallium Speciation*, **Angew. Chem. Int. Ed.** 59 (2020) 19592-19601.

* Invited for Special Issue on "Functional Porous Materials Chemistry"

* Selected as Very Important Paper (VIP)

91. Choudhary, M., Jain, R., Rimer, J.D., *In situ imaging of 2-dimensional surface growth reveals the prevalence and role of defects in zeolite crystallization*, **Proc. Natl. Acad. Sci. USA** 117 (2020) 28632-28639.

90. Freeman, E.E., Neeway, J.J., Motkuri, R.K., Rimer, J.D., Mpourmpakis, G., *Understanding the Initial Zeolite Growth Steps with First Principles Calculations*, **AIChE J.** e17107 (2020) 1-11.

89. Le, T.T., Chawla, A., Rimer, J.D., *Impact of Acid Site Speciation and Spatial Gradients on Zeolite Catalysis*, **J. Catal.** 391 (2020) 56-68. Invited Submission

88. Chawla, A., Linares, N., Li, R., Garcia Martinez, J., Rimer, J.D., *Tracking Zeolite Crystallization by Elemental Mapping*, **Chem. Mater.** 32 (2020) 3278-3287

87. Jain, R., Rimer, J.D., *Seed-Assisted Zeolite Synthesis: The Impact of Seeding Conditions and Interzeolite Transformations on Crystal Structure and Morphology*, **Micropor. Mesopor. Mater.** 300 (2020) 110174

* Invited for Special Issue on "Enigma of Zeolites"

86. Dai, H., Shen, Y., Yang, T., Lee, C., Fu, D., Agarwal, A., Le, T.T., Tsapatsis, M., Palmer, J.C., Weckhuysen, B.M., Dauenhauer, P.J., Zou, X., Rimer, J.D., *Finned Zeolite Catalysts with Enhanced Mass Transport Properties*, **Nat. Mater.** 19 (2020) 1074-1080

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* Artwork selected for the front cover of Focus Issue on *Zeolite Catalysts*

* Editorial: *Zeolite Catalysts Come into Focus*, **Nat. Mater.** 19 (2020) 1037

* News & Views: Sastre, G., *Look Beneath the Surface*, **Nat. Mater.** 19 (2020) 1040-1041

85. Susman, M.D., Pham, H.N., Zhao, X., West, D.H., Chinta, S., Bollini, P., Datye, A.K., Rimer, J.D., *Synthesis of NiO Crystals Exposing High-Index Facets*, **Angew. Chem. Int. Ed.** 59 (2020) 15119-15123

* Selected as Very Important Paper (VIP)

84. Zhou, Y., Mu, Y., Hsieh, M.F., Kabius, B., Pacheco, C., Bator, C., Rioux, R.M., Rimer, J.D., *Enhanced Surface Activity of MWW Zeolite Nanosheets Prepared via a One Step Synthesis*, **J. Am. Chem. Soc.** 142 (2020) 8211-8222

83. Ghosh, R.S., Le, T.T., Terlier, T., Rimer, J.D., Harold, M.P., Wang, D., *Enhanced Selective Oxidation of Ammonia in a Pt/Al_2O_3@Cu/ZSM-5 Core Shell Catalyst*, **ACS Catal.** 10 (2020) 3604-3617

82. Rimer, J.D., *Inorganic Ions Regulate Amorphous-to-crystal Shape Preservation in Biomineralization*, **Proc. Natl. Acad. Sci. USA** 117 (2020) 3360-3362

81. Rimer, J.D., *Crystals from Colloidal Assembly*, **Nat. Mater.** 19 (2020) 375-376

80. Kim, D., Olympiou, C., McCoy, C.P., Irwin, N.J., Rimer, J.D., *Time-Resolved Dynamics of Struvite Crystallization: Insights from the Macroscopic to Molecular Scale*, **Chem. Eur. J.** 26 (2020) 3555-3563

*Artwork selected for inside front cover

79. Ma, W., Lutsko, J.F., Rimer, J.D., Vekilov, P.G., *Antagonistic Cooperativity between Crystal Growth Modifiers by Attenuation of Step Pinning*, **Nature** 577 (2020) 497-501

78. Kumar, M., Berkson, Z.J., Clark, R.J., Shen, Y., Prisco, N.A., Zheng, Q., Zeng, Z., Zheng, H., McCusker, L.B., Palmer, J.C., Chmelka, B.F., Rimer, J.D., *Crystallization of Mordenite Platelets using Cooperative Organic Structure-directing Agents*, **J. Am. Chem. Soc.** 141 (2019) 20155-20165

77. Xu, L., Choudhary, M.K., Muraoka, K., Chaikittisilp, W., Wakihara, T., Rimer, J.D., Okubo, T., *Bridging the Gap between Structurally-distinct 2D Lamellar Zeolitic Precursors through a 3D Germanosilicate Intermediate*, **Angew. Chem. Int. Ed.** 131 (2019) 14671-14675

76. Geng, X., Meegan, J., Smith, C., Sakhaee, K., Rimer, J.D., *Crystallization of Hierarchical Ammonium Urate: Insight into the Formation of Cetacean Renal Stones*, **Cryst. Growth Des.** 19 (2019) 6727-6735

75. Choudhary, M.K., Kumar, M., Rimer, J.D., *Regulating Nonclassical Pathways of Silicalite-1 Crystallization through Controlled Evolution of Amorphous Precursors*, **Angew. Chem. Int. Ed.** 131 (2019) 15859-15863

74. Thirumalai, H., Rimer, J.D., Grabow, L.C., *Quantifiation of Model Errors Related to the Approximate Description of Active Sites in Metal-exchanged Zeolites*, **ChemCatChem** 11 (2019) 5055-5067

73. Qin, W., Zhou, Y., Rimer, J.D., *Deleterious Effects of Non-framework Al Species on the Catalytic Performance of ZSM-5 Crystals Synthesized at Low Temperature*, **React. Chem. Eng.** 4 (2019) 1957-1968

72. Kim, D., Rimer, J.D., Asplin, J.R., *Hydroxycitrate: A Potential New Therapy for Calcium Urolithiasis*, **Urolithiasis** 47 (2019) 311-320

71. Qin, W., Jain, R., Robles Hernández, F.C., Rimer, J.D., *Organic-Free Interzeolite Transformation in the Absence of Common Building Units*, **Chem. Eur. J.** 25 (2019) 5893-5898

70. Qin, W., Agarwal, A., Choudhary, M.K., Palmer, J.C., Rimer, J.D., *Molecular Modifiers Suppress Nonclassical Pathways of Zeolite Crystallization*, **Chem. Mater.** 31 (2019) 3228-3238

69. Sosa, R.D., Geng, X., Reynolds, M.A., Rimer, J.D., Conrad, J.C., *A Microfluidic Approach for Probing Hydrodynamic Effects in Barite Scale Formation*, **Lab on a Chip** 19 (2019) 1534-1544

*Artwork selected for inside front cover

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68. Chawla, A., Linares, N., Rimer, J.D., Garcia Martinez, J., *Time-Resolved Dynamics of Intracrystalline Mesoporosity Generation in Zeolite USY*, **Chem. Mater.** 31 (2019) 5005-5013

    *Artwork selected for cover

67. Rimer, J.D., Sakhaee, K., Maalouf, N.M., *Citrate Therapy for Calcium Phosphate Stones*, **Curr. Opin. Nephrol. Hypertens.** 28 (2019) 130-139

66. Hwang, A., Le, T.T., Shi, Z., Dai, H., Rimer, J.D., Bhan, A., *Effects of Diffusional Constraints on Lifetime and Selectivity in Methanol-to-Olefins Catalysis on HSAPO-34*, **J. Catal.** 369 (2019) 122-132

65. Shen, Y., Le, T.T., Fu, D., Schmidt, J.E., Filez, M., Weckhuysen, B.M., Rimer, J.D., *Deconvoluting the Competing Effects of Zeolite Framework Topology and Diffusion Path Length on Methanol-to-Hydrocarbons Reaction*, **ACS Catal.** 8 (2018) 11042-11053

64. Chung, J., Taylor, M.G., Granja, I., Asplin, J.R., Mpourmpakis, G., Rimer, J.D., *Factors Differentiating the Effectiveness of Polyprotic Acids as Inhibitors of Calcium Oxalate Crystallization in Kidney Stone Disease*, **Cryst. Growth Des.** 18 (2018) 5617-5627

63. Olafson, K.N., Clark, R.J., Vekilov, P.G., Palmer, J.C., Rimer, J.D., *Structuring of Organic Solvents at Solid Interfaces and its Ramifications for Antimalarial Adsorption on Beta-Hematin Crystals*, **ACS Appl. Mater. Interfaces** 10 (2018) 29288-29298

62. Rimer, J.D., *Rational Design of Zeolite Catalysts*, **Nat. Catal.** 1 (2018) 488-489

61. Li, R., Chawla, A., Linares, N., Sutjianto, J.G., Chapman, K.W., Garcia Martinez, J., Rimer, J.D., *Diverse Physical States of Amorphous Precursors in Zeolite Synthesis*, **Ind. Eng. Chem. Res.** 57 (2018) 8460-8471

    * Invited for Special Issue on "2018 Class of Influential Researchers"

60. Li, R., Linares, N., Sutjianto, J.G., Chawla, A., Garcia Martinez, J., Rimer, J.D., *Ultrasmall Zeolite L Crystals Prepared from Highly-Interdispersed Alkali-Silicate Precursors*, **Angew. Chem. Int. Ed.** 57 (2018) 11283-11288

59. Susman, M.D., Pham, H.N., Datye, A.K., Chinta, S., Rimer, J.D., *Factors Governing MgO(111) Faceting in the Thermal Decomposition of Oxide Precursors*, **Chem. Mater.** 30 (2018) 2641-2650

    *Artwork selected for cover

58. Kumar, M., Choudhary, M., Rimer, J.D., *Transient Modes of Zeolite LTA Surface Growth from 3D Gel-like Islands to 2D Single Layers*, **Nat. Commun.** 9 (2018) 2129

57. Shen, Y., Le, T.T., Li, R., Rimer, J.D., *Optimized Synthesis of ZSM-11 Catalysts using 1,8-Diaminooctane as a Structure-Directing Agent*, **ChemPhysChem** 19 (2018) 529-537

    * Invited for Special Issue on "Reactions in Confined Spaces"

56. Rimer, J.D., Le, T.T., Chawla, A., *Crystal Engineering for Catalysis*, **Annu. Rev. Chem. Biomol. Eng.** 9 (2018) 283-309

55. Chawla, A., Li, R., Jain, R., Clark, R.J., Sutjianto, J.G., Palmer, J.C., Rimer, J.D., *Cooperative Effects of Inorganic and Organic Structure-Directing Agents in ZSM-5 Crystallization*, **Mol. Syst. Des. Eng.** 3 (2018) 159-170

    * Invited for Special Issue on "Advances in Directed Self-Assembly"

    * Included in the "Emerging Investigators" issue

    * Selected as a 2018 MESD Hot Article

54. Li, R., Smolyakova, A., Maayan, G., Rimer, J.D., *Designed Peptoids as Tunable Modifiers of Zeolite Crystallization*, **Chem. Mater.** 29 (2017) 9536-9546

53. Olafson, K.N., Rimer, J.D., Vekilov, P.G., *Early Onset of Kinetic Roughening Due to Finite Step Width in Hematin Crystallization*, **Phys. Rev. Lett.** 119 (2017) 198101(1-6)

52. Aseem, Conato, M.T., Jeba, G.G., Rimer, J.D., Harold, M.P., *Oxidative Coupling of Methane over Mixed Metal Oxide Catalysts: Steady State Multiplicity and Catalyst Durability*, **Chem. Eng. J.** 331 (2017) 132-143

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51. Olafson, K.N., Nguyen, T.Q., Vekilov, P.G., Rimer, J.D., *Deconstructing Quinoline-Class Antimalarials to Identify Fundamental Physicochemical Properties of Hematin Crystal Growth Inhibitors*, **Chem. Eur. J.** 23 (2017) 13638-13647 *Artwork selected as frontispiece

50. Chung, J., Sosa, R., Rimer, J.D., *Elucidating the Effects of Polyprotic Acid Speciation in Calcium Oxalate Crystallization*, **Cryst. Growth Des.** 17 (2017) 4280-4288

49. Oleksiak, M.D., Hsieh, M-F., Muraoka, K., Conato, M.T., Shimojima, A., Okubo, T., Chaikittisilp, W., Rimer, J.D., *Organic-Free Synthesis of a Highly Siliceous Faujasite Zeolite with Spatially-Biased Q^4(nAl) Si Speciation*, **Angew. Chem. Int. Ed.** 56 (2017) 13366-13371

*Artwork selected for cover

48. Alamani, B.G., Rimer, J.D., *Molecular Modifiers of Kidney Stone Growth*, **Curr. Opin. Nephrol. Hypertens.** 26 (2017) 256-265

* Invited review for special section on Mineral Metabolism

47. Olafson, K.N., Nguyen, T., Rimer, J.D., Vekilov, P.G., *Antimalarials Inhibit Hematin Crystallization by Specific Drug-Surface Site Interactions*, **Proc. Natl. Acad. Sci. USA** 114 (2017) 7531-7536

46. Hsieh, M.F., Zhou, Y., Rimer, J.D., *Silver-Promoted Dehydroaromatization of Ethylene over ZSM-5 Catalysts*, **ChemCatChem** 9 (2017) 1675-1682

* Invited for Special Issue on "Catalysis for New Energy Technology"

45. Hwang, A., Kumar, M., Rimer, J.D., Bhan, A., *Implications of Methanol Disproportionation on Catalyst Lifetime for Methanol-to-Olefins Conversion by HSSZ-13*, **J. Catal.** 346 (2017) 154-160

46. Rimer, J.D., Kolbach, A.M., Ward, M.D., Wesson, J.A., *The Role of Macromolecules in the Formation of Kidney Stones*, **Urolithiasis** 45 (2017), 57-74

* Invited for Special Issue on "Physicochemical, Biochemical and Biological Mechanisms of Stone Formation"

43. Ketchum, M.A., Lee, A.M., Vekilov, P.G., Rimer, J.D., *Biomimetic Assay for Hematin Crystallization Inhibitors: A New Platform to Screen Antimalarial Drugs*, **Cryst. Growth Des.** 17 (2017) 197-206

42. Shete, M.H., Kumar, M., Kim, D., Rangnekar, N., Xu, D., Topuz, B., Agrawal, K.V., Karapetrova, E., Stottrup, B., Al-Thabaiti, S., Basahel, S., Narasimharao, K., Rimer, J.D., Tsapatsis, M., *Nanoscale Control of Homoepitaxial Growth on a Two-Dimensional Zeolite*, **Angew. Chem. Int. Ed.** 56 (2017) 535-539

*Selected as VIP article
*Artwork selected for front cover

41. Ghorbanpour, A., Rimer, J.D., Grabow, L.C., *Computational Assessment of the Dominant Factors Governing the Mechanism of Methanol Dehydration over H-ZSM-5 with Heterogeneous Al Distribution*, **ACS Catal.** 6 (2016) 2287-2298

40. Olafson, K.N., Li, R., Alamani, B.G., Rimer, J.D., *Engineering Crystal Modifiers: Bridging Classical and Nonclassical Crystallization*, **Chem. Mater.** 28 (2016) 8453-8465

*Invited for Up & Coming Series
*Artwork selected for cover

39. Lupulescu, A.I., Qin, W., and Rimer, J.D., *Tuning Zeolite Precursor Interactions by Switching the Valence of Polyamine Modifiers*, **Langmuir** 32 (2016) 11888-11898

38. Ramamoorthy, S., Kwak, J.H., Karande, P., Farmanesh, S., Rimer, J.D., *A High-throughput Assay for Screening Modifiers of Calcium Oxalate Crystallization*, **AIChE J.** 62 (2016) 3538-3546

37. Oleksiak, M.D., Soltis, J.A., Conato, M.T., Penn, R.L., Rimer, J.D., *Nucleation of FAU and LTA Zeolites from Heterogeneous Aluminosilicate Precursors*, **Chem. Mater.** 28 (2016) 4906-4916

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36. Oleksiak, M.D., Ghorbanpour, A., Conato, M.T., McGrail, B.P., Grabow, L.C., Motkuri, R.K., Rimer, J.D., *Synthesis Strategies for Ultrastable Zeolite GIS Polymorphs as Sorbents for Selective Separations*, **Chem. Eur. J.** 22 (2016) 16078-16088

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PUBLICATIONS : CONFERENCE PROCEEDINGS

2. Rimer, J.D., Vlachos, D.G., Lobo, R.F.. *Kinetics of Silicalite-1 Crystallization*, **Studies in Surface Science and Catalysis** Pts A-C, From Zeolites to Porous MOF Materials – the 40th Anniversary of International Zeolite Conference, 170 (2007) 133-144.
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PATENTS AND PROVISIONAL PATENTS

2020 Rimer, J.D., Susman, M.D., Chinta, S., "Structured metal oxides for improved catalytic performance" University of Houston and SABIC Americas (Being Filed by SABIC)

2020 Rimer, J.D., Susman, M.D., Chinta, S., "Structured metal oxides on substrates for improved catalytic performance" University of Houston and SABIC Americas (Being Filed by SABIC)

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PRESENTATIONS AND POSTERS

2021 American Chemical Society Spring Meeting **Virtual**

270. Zhao, X., Ning, Q., Grabow, L.C., Rimer, J.D., Bollini, P., Carbonate Dimorphism and the Interpretation of Stoichiometric and Non-Stoichiometric Oxygen-Driven Mars-van Krevelen Redox Cycles

2021 International Symposium on Chemical Reaction Engineering **New Delhi, India**

269. Zhao, X., Ning, Q., Grabow, L.C., Rimer, J.D., Bollini, P., The Role of Non-Stoichiometric Oxygen in Determining Ethene Selectivity in Nickel Oxide-Catalyzed Oxidative Dehydrogenation of Ethane

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2020 Southwest Catalysis Society Symposium **Virtual**

268. Dai, H., Shen, Y., Yang, T., Lee, C., Liu, W., Fu, D., Agarwal, A., Le, T.T., Tsapatsis, M., Palmer, J.C., Li, X., Weckhuysen, B.M., Dauenhauer, P.J., Zou, X., Rimer, J.D., Finned Two- and Three-Dimensional Zeolites: A New Class of Hierarchical Catalysts, (Poster)

267. Shilpa, K., Han, S., Le, T.T., Dai, H., Rimer, J.D., New Classes of Zeolite Catalysts with Improved Diffusion Properties, (Poster)

261. Parmar, P., Cha, S., Salavati-Fard, T., Agarwal, A., Palmer, J.C., Grabow, L.C., Rimer, J.D., Spatiotemporal Coke Coupling Enhances Para-Xylene Selectivity in Highly Stable MCM-22 Catalyst, (Poster)

266. Liang, Y., Jacobson, A.J., Rimer, J.D., Multivalent Cations Function as Accelerants and Structure-directing Agents of Zeolite Crystallization, (Poster)

265. Susman, M.D., Pham, H.N., Zhao, X., West, D.H., Chinta, S., Bollini, P., Datye, A.K., Rimer, J.D., Molten Salt Synthesis of NiO, MgO, and Their Mixed Oxides: Designing New Methods to Control Crystal Morphology, (Poster)

264. Zhao, X., Ning, O., Grabow, L.C., Rimer, J.D., Bollini, P., Site requirements for ethane oxidative dehydrogenation over bulk NiO based catalysts, (Poster)

2020 NECZA Symposium **Virtual**

263. Liang, Y., Jacobson, A.J., Rimer, J.D., Strontium Ions Function as both an Accelerant and Structure-Directing Agent of Chabazite Crystallization, (Poster)

262. Jain, R., Chawla, A., Linares, N., Garcia-Martinez, J., Rimer, J.D., Seed-Assisted Synthesis of Self-Pillared Pentasil (SPP) Zeolites, (Poster)

261. Dai, H., Shen, Y., Yang, T., Lee, C., Fu, D., Agarwarl, A., Le, T.T., Tsapatsis, M., Palmer, J.C., Weckhuysen, B.M., Dauenhauer, P.J., Zou, X., Rimer, J.D., Finned Zeolite Catalysts, (Poster)

260. Parmar, D., Cha, S.H., Salavati-Fard, T., Agrawal, A., Palmer, J.C., Grabow, L.C., Rimer, J.D., Highly Stable MCM-22 Catalysts with Enhanced Para-Xylene Selectivity, (Poster)

2020 OChEGS Symposium **Virtual**

259. Dai, H., Shen, Y., Yang, T., Lee, C., Fu, D., Agarwarl, A., Le, T.T., Tsapatsis, M., Palmer, J.C., Weckhuysen, B.M., Dauenhauer, P.J., Zou, X., Rimer, J.D., Finned Zeolite Catalysts, (Oral Presentation)

258. Sosa, R.D., Geng, X., Reynolds, M.A., Conrad, J.C., Rimer, J.D., Irreversible Inhibition of Barite Crystallization: A Unique Mechanism for Treating Scale Formation, (Poster)

257. Zhao, X., Ning, Q., Grabow, L., Rimer, J.D., Bollini, P., CO_2 adsorption over bulk NiO catalysts: determining active oxygen species over NiO catalyst for ethane oxidative dehydrogenation reaction, (Poster)

256. Kim, D., Moore, J., Irwin, N., Rimer, J.D., Dual Role of Polyphosphates as Potent Inhibitors of Struvite Nucleation and Crystal Growth, (Poster)

255. Mallette, A.J., Freeman, E., Mpourmpakis, G., Motkuri, R.K., Neeway, J., Rimer, J.D., Zinc-Incorporated FAU Zeolite: Simultaneous Control Over Crystallization Kinetics, Interzeolite Conversions, and Physicochemical Properties, (Poster)

254. Liang, Y., Jacobson, A.J., Rimer, J.D., Strontium Ions Function as both an Accelerant and Structure-Directing Agent of Chabazite Crystallization, (Poster)

253. Parmar, D., Cha, S.H., Salavati-Fard, T., Agrawal, A., Palmer, J.C., Grabow, L.C., Rimer, J.D., Highly Stable MCM-22 Catalysts with Enhanced Para-Xylene Selectivity, (Poster)

252. Ma, W., Vekilov, P.G., Rimer, J.D., Reviewing Non-classical Pathways of Cholesterol Crystallization Regulated by Cluster Precursors, (Poster)

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2020 American Institute of Chemical Engineers Annual Conference **Virtual**

251. Kim, D., Moore, J., Irwin, N., Rimer, J.D., Molecular Modifiers Suppress Struvite Formation via Unique Mechanisms, Nucleation and Growth (Separations)

250. Susman, M.D., Pham, H.N., Zhao, X., West, D., Chinta, S., Bollini, P., Datye, A.K., Rimer, J.D., Molten Salt Synthesis of Metal Oxides Exposing Polar and High Index Facets, Oral, Catalyst Design, Synthesis, and Characterization (CRE)

249. Susman, M.D., Pham, H.N., Zhao, X., West, D., Chinta, S., Bollini, P., Datye, A.K., Rimer, J.D., Molten Salt Synthesis of MgO and NiO Exposing Polar and High Index Facets, MESD Poster Session

248. Mallette, A.J., Freeman, E., Mpourmpakis, G., Motkuri, R.K., Neeway, J., Rimer, J.D., A Multidirectional Approach to Understanding and Controlling Zeolite Crystallization, Oral, Synthesis and Application of Inorganic Materials 1

247. Mallette, A.J., Freeman, E., Mpourmpakis, G., Motkuri, R.K., Neeway, J., Rimer, J.D., A Multidirectional Approach to Understanding and Controlling Zeolite Crystallization, Poster, Advances in Zeolite Science and Technology

246. Dai, H., Shen, Y., Yang, T., Lee, C., Fu, D., Agarwal, A., Le, T.T., Tsapatsis, M., Palmer, J.C., Weckhuysen, B.M., Dauenhauer, P.J., Zou, X., Rimer, J.D., Finned Zeolite Catalysts with Enhanced Mass Transport Properties, Oral, Microporous and Mesoporous Materials (CRE)

245. Dai, H., Liu, W., Li, R., Li, X., Rimer, J.D., Surface-enhanced Techniques to Reduce Mass Transport Restrictions of Zeolites, Oral, Two-Dimensional Materials and Thin Films (MESD)

244. Dai, H., Shen, Y., Yang, T., Lee, C., Fu, D., Agarwal, A., Le, T.T., Tsapatsis, M., Palmer, J.C., Weckhuysen, B.M., Dauenhauer, P.J., Zou, X., Rimer, J.D., Finned Zeolite Catalysts with Enhanced Mass Transport Properties, CRE Poster Session

243. Sosa, R.D., Geng, X., Reynolds, M.A., Conrad, J.C., Rimer, J.D., Irreversible Inhibition of Barite Crystallization: A Unique Mechanism for Treating Scale Formation, Oral, Nucleation and Growth (Separations)

242. Sosa, R.D., Geng, X., Reynolds, M.A., Conrad, J.C., Rimer, J.D., Irreversible Inhibition of Barite Crystallization: A Unique Mechanism for Treating Scale Formation, MESD Poster Session

241. Parmar, D., Cha, S.H., Salavati-fard, T., Grabow, L.C., Rimer, J.D., A Paradigm Shift in Catalyst Stability for Toluene Alkylation with Methanol, Oral, Reaction Chemistry and Engineering I: From Reaction Mechanisms to Continuous Synthesis (CRE)

240. Parmar, D., Cha, S.H., Salavati-fard, T., Grabow, L.C., Rimer, J.D., A Paradigm Shift in Catalyst Stability for Toluene Alkylation with Methanol, CRE Poster Session

239. Jain, R., Chawla, A., Linares, N., Garcia-Martinez, J., Rimer, J.D., Seed-Assisted Synthesis of Hierarchical Zeolites, Oral, MESD Graduate Student Award Session

238. Jain, R., Chawla, A., Linares, N., Garcia-Martinez, J., Rimer, J.D., Seed-Assisted Synthesis of Hierarchical Zeolites, MESD Poster Session

237. Jain, R., Choudhary, M.K., Rimer, J.D., In Situ Observation of Zeolite Crystallization by Multivariant Pathways, Oral, Catalyst Design, Synthesis, and Characterization (CRE)

236. Freeman, E., Mallette, A.J., Motkuri, R.K., Neeway, J., Rimer, J.D., Mpourmpakis, G., The Multifunctional Role of Zinc on Zeolite Growth, Oral

235. Zhao, X., Susman, M.D., Rimer, J.D., Bollini, P., Kinetics of Ethane Oxidative Dehydrogenation Over Bulk NiO-based Catalysts, Oral, Fundamentals of Catalysis and Surface Science (CRE)

234. Zhao, X., Susman, M.D., Rimer, J.D., Bollini, P., Kinetics of Ethane Oxidative Dehydrogenation Over Bulk NiO-based Catalysts, CRE Poster Session

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Great Plains Catalysis Society (GPCS) Fall Symposium **Virtual**

233. Dai, H., Shen, Y., Yang, T., Lee, C., Fu, D., Agarwal, A., Le, T.T., Tsapatsis, M., Palmer, J.C., Weckhuysen, B.M., Dauenhauer, P.J., Zou, X., Rimer, J.D., Finned Zeolite Catalysts, Poster Award Lecture

232. Liang, Y., Jacobson, A.J., Rimer, J.D., Strontium Ions Function as both an Accelerant and Structure-directing Agent of Chabazite Crystallization, Poster Talk

231. Jain, R., Chawla, A., Linares, N., Garcia-Martinez, J., Rimer, J.D., Seed-Assisted Synthesis of Hierarchical Zeolites, Poster Talk

230. Zhao, X., Susman, M.D., J., Rimer, J.D., Bollini, P., Kinetics of Ethane Oxidative Dehydrogenation over Bulk NiO-Based Catalysts, Poster Talk

2020 Microscopy & Microanalysis Meeting **Virtual**

229. Calderon, H.A., Rimer, J.D., Robles Hernandez, F.C., Kisielowski, C., Low Dose Electron Microscopy of Ammonium Urates, DOI: 10.1017/S1431927620020887

2020 Materials Science & Technology 2020 **Pittsburgh, PA**

228. Neeway, J., Motkuri, M., Reiser, J., Freeman, E., Mpourmpakis, G., Mallette, A., Rimer, J.D., The Effect of Zinc on Zeolite Formation Kinetics and Vitrified Nuclear Waste Dissolution, *Session on Ceramics in the Nuclear Fuel Cycle*, October 2020 (Conference was Cancelled)

2020 International workshop on Positron Studies of Defects 2020 (PSD-20) **Mumbai, India**

227. Urban-Klaehn, J., Le, T.T., Taylor, C.N., Gering, K.L., Fushimi, R.R., Rimer, J.D., Studies of Catalytic Zeolites in Conversion Process by use of PAS, March 2020

2019 15th International Workshop on Slow Positron Beam Techniques & Applications Prague, Czech Republic

226. Urban-Klaehn, J.M., Taylor, C.N., Gering, K.L., Rimer, J.D., Fushimi, R.R., Positron Annihilation Analysis for Zeolites/Silica Gel used in Catalysis, September 2-6, 2019

2019 American Society of Tropical Medicine & Hygiene **National Harbor, MD**

225. Ma, W., Balta, V., Olafson, K.N., Miljanic, O.S., Sullivan Jr., D.J., Vekilov, P.G., Rimer, J.D., Dual Site and Mechanism of Action of Artemisinin Antimalarials, November 20-24, 2019

2019 MRS XXVIII International Materials Research Congress **Cancun, Mexico**

224. Calderon, H.A., Geng, X., Rimer, J.D., Hashiguchi, H., Sakhaee, K., Garibay Febles, V., Kisielowski, C. Robles Hernandez, F.C., Low Dose Analysis of Ammonium Urates, August 18-23, 2019

2019 American Institute of Chemical Engineers Annual Conference **Orlando, FL**

223. Salavati-fard, T., Parmar, D., Rimer, J.D., Grabow, L.C., Toluene Alkylation with Methanol in Brønsted Acid Zeolites, Catalysis with Microporous and Mesoporous Materials I: Gas-phase Reactions, Talk 58e

222. Freeman, E., Rimer, J.D., Mpourmpakis, G., Understanding Oligomerization Steps in Zeolite Growth Using Density Functional Theory, Synthesis and Application of Inorganic Materials: Part I, Talk 101a

221. Jain, R., Chawla, A., Linares, N. Garcia-Martinez, J., Rimer, J.D., Organic-Free Route for the Synthesis of Hierarchical Zeolite ZSM-11 Catalysts, Synthesis and Application of Inorganic Materials: Part I, Talk 101b

220. Chawla, A., Linares, N., Li, R., Jain, R., Clark, R.J., Sutjianto, J., Palmer, J.C., Garcia-Martinez, J., Rimer, J.D., Dual Role of Surfactants as Structure-Directing Agents and Mesoporogens in the Preparation of Zeolites, Poster 183aa

219. Zhou, Y., Hsieh, M.F., Kabius, B., Mu, Y., Rioux, R., Rimer, J.D., A Commercially-Viable One-Step Synthesis Method to Prepare MWW Zeolite Nanosheets, Poster 183ab

218. Sosa, R.D., Geng, X., Palmer, J.C., Reynolds, M.A., Conrad, J.C., Rimer, J.D., Molecular Modifiers Reveal Unique Inhibition and Dissolution Mechanisms in Barite Scale, Poster 183ak

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217. Kim, D., Olympiou, C., Irwin, N., Rimer, J.D., Real Time Evaluation of Struvite Formation: Insights from the Macroscopic to Molecular Scale, Poster 183al

216. Jain, R., Rimer, J.D., Elucidating the Factors Governing Organic-Free Interzeolite Transformation, Poster 183z

215. Dai, H., Shen, Y., Fu, D., Le, T.T., Yang, T., Filez, M., Zou, X., Weckhuysen, B.M., Rimer, J.D., Fin-like Zeolite Crystals: A New Class of Hierarchical Catalysts, Catalysis with Microporous and Mesoporous Materials III: Material Design, Talk 196c

214. Kim, D., Olympiou, C., Irwin, N., Rimer, J.D., Dynamics of Struvite Formation: Insights from the Macroscopic to Molecular Scale, Nucleation and Growth I, Talk 477c

213. Sosa, R.D., Geng, X., Palmer, J.C., Reynolds, M.A., Conrad, J.C., Rimer, J.D., Environmentally Friendly Molecular Modifiers Reveal Unique Inhibition and Dissolution Mechanisms in Barite Scale, Nucleation and Growth I, Talk 477f

212. Zhou, Y., Thirumalai, H., Grabow, L.C., Rimer, J.D., Metal-Promoted Dehydroaromatization of Ethylene over ZSM-5 Catalysts, Poster 560dj

211. Rajat, G., Harold, M., Le, T.T., Rimer, J.D., Wang, D., Core-Shell Pt/Al_2O_3@Cu/ZSM-5 Catalyst for Ammonia Slip Catalyst in Diesel Aftertreatment, Poster 560ff

210. Chawla, A., Linares, N., Li, R., Jain, R., Clark, R.J., Sutjianto, J., Palmer, J.C., Garcia-Martinez, J., Rimer, J.D., Dual Role of Surfactants in Zeolite Synthesis and Catalyst Optimization, Poster 560hf

209. Jain, R., Rimer, J.D., Elucidating Factors Governing Organic-Free Interzeolite Transformation, Poster 560hg

208. Dai, H., Shen, Y., Fu, D., Le, T.T., Yang, T., Filez, M., Zou, X., Weckhuysen, B.M., Rimer, J.D., Fin-like Zeolite Catalysts: A New Class of Hierarchical Materials, Poster 560hj

207. Ma, W., Rimer, J.D., Vekilov, P.G., Irreversible Inhibition of Hematin Crystallization by Cooperative Phase Behaviors Induced by Antimalarials, Nucleation and Growth II, Talk 599d

206. Zhou, Y., Thirumalai, H., Grabow, L.C., Rimer, J.D., Dehydroaromatization of Ethylene over Metal-Exchanged H-ZSM-5 Catalysts: The Nature and Role of (Extra)Framework Acid Sites, Confluence of Experimental and Theoretical Methods, Talk 632e

205. Zhou, Y., Hsieh, M.F., Kabius, B., Mu, Y., Rioux, R., Rimer, J.D., Enhanced Surface Activity of MWW Zeolite Nanosheets Prepared By a One-Step Synthesis Method, Two-dimensional Materials, Talk 713a

204. Thirumalai, H., Zhou, Y., Menon, U., Rimer, J.D., Grabow, L.C., Insights into the Dehydroaromatization of Ethylene over Ag-ZSM-5 Catalysts Using Transient Kinetics Techniques and Density Functional Theory, Catalytic Hydrocarbon Processing III: Fundamentals of Alkane Activation, Talk 721e

203. Chawla, A., Linares, N., Garcia-Martinez, J., Rimer, J.D., Time-Resolved Dynamics of Intracrystalline Mesoporosity Generation in USY Zeolite, Elucidating Catalyst Structures Through Advanced Characterization, Talk 754d

202. Rajat, G., Harold, M., Le, T.T., Rimer, J.D., Wang, D., Core-Shell Pt/Al_2O_3@Cu/ZSM-5 Catalyst for Selective NH_3 Oxidation: Synthesis, Evaluation, and Optimization, Environmental and Automotive Catalysis II, Talk 762d

2019 Gordon Research Conference on Nanoporous Materials & Their Applications **Andover, NH**

201. Dai, H., Rimer, J.D., Fin-like Zeolite Crystals: A New Class of Hierarchical Catalysts

200. Le, T.T., Rimer, J.D., Controlling Silicon and Aluminum Zoning in ZSM-5 for Improved Performance in the Methanol-to-Hydrocarbon Reaction

199. Agarwal, A., Rimer, J.D., Palmer, J.C., Solvent Structure and Dynamics near the Surfaces of Silicalite-1

198. Chawla, A., Rimer, J.D., Dual Role of Surfactants in Zeolite Synthesis and Catalyst Optimization

197. Jain, R., Rimer, J.D., Exploring the Boundaries of Organic-Free Interzeolite Transformation and Organic-Free Route for the Synthesis of Hierarchical Zeolite ZSM-11 Catalysts, poster

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2019 Gordon Research Conference on Crystal Growth & Assembly **Manchester, NH**

196. Kim, D., Rimer, J.D., Dynamics of Struvite Formation: Insights from Macroscopic to Molecular Scale, poster

195. Susman, M., Rimer, J.D., Molten Salt Synthesis (MSS) of MgO(111): Critical Factors Governing the Crystallization Process, poster

194. Alamani, B., Rimer, J.D., Bimodal Roles of Metal Ions in Calcium Oxalate Mineralization, poster

193. Geng, X., Rimer, J.D., Crystallization of Hierarchical Ammonium Urate: Insight into the Formation of Cetacean Renal Stones, poster

192. Ma, W., Rimer, J.D., Vekilov, P.G., Antimalarials Inhibit Hematin Crystallization Irreversibly by Controlling Cooperative Behaviors of Hematin, poster

191. Sosa, R., Rimer, J.D., Investigating the Role of Hydrodynamics in Barite Mineralization, poster

2019 12th Natural Gas Conversion Symposium **San Antonio, TX**

190. Susman, M., Chinta, S., Rimer, J.D., Crystallization of Metal Oxides with Well-defined Morphologies for Converting Methane to High-value Chemicals, *Session on OCM Catalysts*, Talk, June 4, 2019

2019 North American Catalysis Society Meeting **Chicago, IL**

189. Thirumalai, H., Zhou, Y., Menon, U., Rimer, J.D., Grabow, L.C., Dehydroaromatization of Ethylene over Bifunctional Lewis/Brønsted Acid Sites in Ag-ZSM-5, Talk #1120

188. Zhou, Y., Hsieh, M.F., Mu, Y., Kabius, B., Rioux, R.M., Rimer, J.D., Enhanced Surface Activity of MWW Zeolite Nanosheets Prepared By a One-Step Synthesis Method, Talk #1410

187. Chawla, A., Jain, R., Linares, N., Garcia Martinez, J., Rimer, J.D., Synthesis of Hierarchical Zeolite ZSM-11 Catalysts via a Novel Organic-Free Route, Talk #0840

186. Qin, W., Patton, M.D., Fu, D., Le, T.T., Filez, M., Schmidt, J.E., Robles Hernández, F.C., Weckhuysen, B.M., Rimer, J.D., Controlling Silicon and Aluminum Zoning in ZSM-5 for Improved Performance in the Methanol-to-Hydrocarbon Reaction, Talk #0920

185. Chawla, A., Li, R., Mu, Y., Jain, R., Sutjianto, J.G., Clark, R.J., Palmer, J.C., Grabow, L.C., Rioux, R., Rimer, J.D., Rational Design of Organic Structure-directing Agents for the Synthesis of Zeolite Catalysts, Poster #0104

2019 Southwest Catalysis Society **Houston, TX**

184. Liang, Y., Jacobson, A.J., Rimer, J.D., Effects of Alkaline Earth Cations in the Rational Design and Synthesis of Zeolites, Poster

183. Choudhary, M.K., Kumar, M., Jain, R., J., Rimer, J.D., Transient Modes of Zeolite Surface Growth: Establishing New Platforms for Catalyst Design from Mechanistic Understandings of Crystallization, Poster

182. Chawla, A., Li, R., Jain, R., Clark, R.J., Sutjianto, J.G., Palmer, J.C., Garcia Martinez, J., Rimer, J.D., Dual Role of Surfactants in Zeolite Synthesis and Catalyst Optimization, Poster

181. Jain, R., Choudhary, M.K., Rimer, J.D., Exploring Novel Routes for Tuning Polymorphism and Elucidating Growth Mechanisms in Zeolites, Poster

180. Le, T.T., Dai, H., Rimer, J.D., Tuning ZSM-11 Catalyst Performance in the Methanol-to-Hydrocarbon Reaction, Poster

179. Dai, H., Le, T.T., Hwang, A., Shi, Z., Bhan, A., Rimer, J.D., Effect of Diffusional Constraints on Lifetime and Selectivity in Methanol-to-Olefins Catalysis on HSAPO-34, Poster

178. Zhou, Y., Hsieh, M.F., Kabius, B., Mu, Y., Rioux, R.M., Rimer, J.D., Enhanced Surface Activity of MWW Zeolite Nanosheets Prepared by a One-Step Synthesis Method, Poster

177. Susman, M., Pham, H.N., Datye, A.K., Chinta, S., Rimer, J.D., Molten Salt Synthesis (MSS) of MgO(111): Critical Factors Governing the Crystallization Process, Poster

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2019 4th North American Symposium on Chemical Reaction Engineering **Houston, TX**

176. Le, T.T., Dai, H., Rimer, J.D., Tuning ZSM-11 Catalyst Performance in the Methanol-to-Hydrocarbon Reaction, Poster

175. Dai, H., Le, T.T., Hwang, A., Shi, Z., Bhan, A., Rimer, J.D., Effect of Diffusional Constraints on Lifetime and Selectivity in Methanol-to-Olefins Catalysis on HSAPO-34, Poster

174. Zhou, Y., Hsieh, M.F., Kabius, B., Rioux, R.M., Rimer, J.D., A Commercially-viable One-step Synthesis Method to Prepare MWW Zeolite Nanosheets, Poster

173. Susman, M., Chinta, S., Rimer, J.D., Molten Salt Synthesis (MSS) of MgO(111): Critical Factors Governing the Crystallization Process, Talk

2018 American Institute of Chemical Engineers Annual Conference **Pittsburgh, PA**

172. Chawla, A., Li, R., Jain, R., Clark, R.J., Sutjianto, J., Palmer, J., García-Martínez, J., Rimer, J.D., Dual Role of Surfactants in Zeolite Synthesis and Catalyst Optimization, Talk 61b

171. Olafson, K.N., Rimer, J.D., Vekilov, P.G., Molecular Interactions Govern Antimalarial Drug Binding to Beta-Hematin Crystal Surfaces, Talk 175c (Withdrawn)

170. Chawla, A., Li, R., Jain, R., Clark, R.J., Sutjianto, J., Palmer, J., García-Martínez, J., Rimer, J.D., Dual Role of Surfactants Towards a Rational Design of Zeolite Catalysts, Poster 195a

169. Choudhary, M.K., Kumar, M., Jain, R., Rimer, J.D., Novel in Situ Methods to Resolve the Complex Pathways of Zeolite Crystal Growth Towards the Optimization of Microporous Catalyst Synthesis, Poster 195d

168. Sosa, R.D., Geng, X., Palmer, J.C., Reynolds, M.A., Conrad, J.C., Rimer, J.D., Designing Inhibitors of Mineral Scale: A New Platform Based on Cooperative Microfluidic Assays and in Situ Atomic Force Microscopy, Poster 195i

167. Zhou, Y., Hsieh, M.F., Rimer, J.D., A Commercially-Viable One-Step Synthesis Method to Prepare MWW Zeolite Nanosheets, Talk 296c

166. Le, T.T., Dai, H., Rimer, J.D., Tuning ZSM-11 Catalyst Performance in the Methanol-to-Hydrocarbon Reaction through Controlled Post-Synthesis Modification, Talk 380g

165. Choudhary, M.K., Kumar, M., Jain, R., Rimer, J.D., Transient Modes of Zeolite Surface Growth: Establishing New Platforms for Catalyst Design from Mechanistic Understandings of Crystallization, Talk 425a

164. Shen, Y., Le, T.T., Fu, D., Schmidt, J.E., Filez, M., Weckhuysen, B., Rimer, J.D., Deconvoluting the Competing Effects of Zeolite Framework Topology Versus Diffusion Path Length on Methanol-to-Hydrocarbon Reactions, Talk 445c

163. Choudhary, M.K., Kumar, M., Jain, R., Rimer, J.D., Novel in Situ Methods to Resolve the Complex Pathways of Zeolite Crystal Growth Towards the Optimization of Microporous Catalyst Synthesis, Poster 544an

162. Chawla, A., Li, R., Jain, R., Clark, R.J., Sutjianto, J., Palmer, J., García-Martínez, J., Rimer, J.D., Dual Role of Surfactants in Zeolite Catalyst Synthesis and Optimization, Poster 544bq

161. Le, T.T., Dai, H., Rimer, J.D., Controlled Post-Synthesis Modification Enables Tuning of ZSM-11 Catalyst Performance in the Methanol-to-Hydrocarbon Reaction, Poster 544cd

160. Zhou, Y., Hsieh, M.F., Thirumalai, H., Grabow, L.C., Rimer, J.D., Dehydroaromatization of Ethylene over Metal-ZSM-5 Catalysts, Poster 544fn

159. Zhou, Y., Hsieh, M.F., Thirumalai, H., Grabow, L.C., Rimer, J.D., Metal-Promoted Dehydroaromatization of Ethylene over ZSM-5 Catalysts, Poster 544fy

158. Thirumalai, H., Menon, U., Zhou, Y., Rimer, J.D., Grabow, L.C., Dehydroaromatization of Ethylene over Bifunctional Lewis-Brønsted Acid Pairs in Ag-ZSM-5, Talk 653d

157. Sosa, R.D., Geng, X., Palmer, J.C., Reynolds, M.A., Conrad, J.C., Rimer, J.D., Designing Inhibitors of Mineral Scale: A New Platform Based on Cooperative Microfluidic and Computational Assays, Talk 580d

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2018 26th American Conference on Crystal Growth and Epitaxy – West **Fallen Leaf Lake, CA**

156. **Olafson, K.N.**, Rimer, J.D., Vekilov, P.G., Early Onset of Kinetic Roughening due to Finite Step Width in Hematin Crystallization, June 10 – 13, 2018

2018 Foundations of Molecular Modeling and Simulation (FOMMS) **Delavan, WI**

155. **Clark, R.J.**, Rimer, J.D., Palmer, J.C., Computational Studies of Novel Structure-Directing Agents and Crystal Growth Modifiers for Zeolite Catalysts, July 15 – 20, 2018

2018 Southwest Catalysis Society Spring Symposium **Houston, TX**

154. **Zhou, Y.**, Hsieh, M.F., Thirumalai, H., Grabow, L.C., Rimer, J.D., Metal-Promoted Dehydroaromatization of Ethylene to Aromatics over ZSM-5 Catalysts

153. **Choudhary, M.K.**, Kumar, M., Jain, R., Rimer, J.D., Transient Modes of Zeolite Surface Growth: Establishing New Platforms for Catalyst Design from Mechanistic Understandings of Crystallization

152. **Jain, R.**, Choudhary, M.K., Rimer, J.D., Exploring Novel Routes for Tuning Polymorphism and Elucidating Growth Mechanisms in Zeolites

151. **Chawla, A..** Li, R., Jain, R., Clark, R.J., Sutjianto, J.G., Palmer, J.C., Garcia-Martinez, J., Rimer, J.D., Dual Role of Surfactants towards a Rational Design of Zeolites

150. **Susman, M.D.**, Pham, H.N., Datye, A.K., Chinta, S., Rimer, J.D., Molten Salt Synthesis (MSS) of MgO(111): Critical Factors Governing the Crystallization Process

149. **Qin, W.**, Patton, M.D., Rimer, J.D., Tailoring the Aluminum Distribution in Zeolite ZSM-5 using Mixtures of Organic and Inorganic Structure-Directing Agents

148. **Le, T.T.**, Shen, Y., Rimer, J.D., Optimizing ZSM-11 Synthesis using 1,8 – Diaminooctane as a Structure-Directing Agent

147. **Shen, Y.**, Le, T.T., Fu, D., Schmidt, J.E., Weckhuysen, B.M., Rimer, J.D., Deconvolutiong the Effects of Zeolite Framework Topology and Diffusion Path Length on Methanol-to-Hydrocarbon Reactions

2018 American Chemical Society Spring Meeting **New Orleans, LA**

146. Sosa, R.D., Geng, X., Palmer, J.C., Reynolds, M., Conrad, J.C., Rimer, J.D., *Designing Inhibitors of Mineral Scale: A New Platform Based on Cooperative Microfluidic and Computational Assays*

2018 American Physical Society (APS) Meeting **Los Angeles, CA**

145. Shete, M., Kumar, M., Kim, D., Rangnekar, N., Xu, D., Rimer, J.D., Tsapatsis, M., *Nanoscale Control of Homoepitaxial Growth on a Two-Dimensional Zeolite*, Talk H02.00004, March 6, 2018

2017 Japan Zeolite Association **Gifu City, Japan**

144. **Chaikittisilp, W.**, Oleksiak, M.D., Muraoka, K., Hsieh, M.F., Conato, M.T., Shimojima, A., Okubo, T., Rimer, J.D., Highly Siliceous FAU-Type Zeolite with Spatially-Biased Q^4(nAl) Si Speciation Synthesized by an Organic-Free Route

2017 Southwest Process Technology Conference **Galveston, TX**

143. **Shen, Y.**, Le, T.T., Rimer, J.D., Optimizing ZSM-11 Catalysts for Methanol-to-Hydrocarbon Reactions, *Meet the Industry Poster Reception* (poster)

142. **Choudhary, M.**, Kumar, M., Rimer, J.D., Time-resolved *In Situ* Studies of Zeolite Crystal Growth, *Meet the Industry Poster Reception* (poster)

2017 SUNCAT Summer Institute **Menlo Park, CA**

141. **Thirumalai, H.**, Hsieh, M.F., Zhou, Y., Grabow, L.C., Rimer, J.D., Fundamentals and Applications of Heterogeneous Catalysis Non-oxidative coupling of methane and ethylene over Ag-ZSM-5 (poster)

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2017 Gordon Research Conference – Nanoporous Materials & Their Applications **Andover, NH**

140. **Li, R.**, Sutjianto, J., Chawla, A., Rimer, J.D., Crystallization of One-dimensional Zeolites by Nonclassical Pathways (poster)

139. **Choudhary, M.K.**, Kumar, M., Rimer, J.D., Elucidating Zeolite Crystal Growth Mechanisms by Atomic Force Microscopy (poster)

2017 Gordon Research Conference – Crystal Growth & Assembly **Biddeford, ME**

138. Alamani, B.G., Guala, D., Dinivahi, M., Melendez, B., Rimer, J.D., Controlling Calcium Oxalate Crystallization: Elucidating Unique Modes of Growth Modifier Action (poster)

137. Olafson, K.N., Rimer, J.D., Vekilov, P.G., Modes of Antimalarial Drug Inhibition in Hematin Crystallization (poster)

2017 American Institute of Chemical Engineers Annual Conference **Minneapolis, MN**

136. **Alamani, B.G.**, Kim, D., Dinivahi, M., Guala, D., Melendez, B.C., Rimer, J.D., Tailoring Inhibitors of Pathological Crystallization: New Platforms for Drug Design

135. **Alamani, B.G.**, Kim, D., Sosa, R., Rimer, J.D., Surface Dynamics of Calcium Oxalate Monohydrate Crystallization: Elucidating Mechanisms of Growth Inhibition

134. **Li, R.**, Sutjianto, J., Chawla, A., Rimer, J.D., Crystallization of One-dimensional Zeolites by Nonclassical Pathways

133. **Sutjianto, J.**, Li, R., Rimer, J.D., Zeolite Catalyst Design and Optimization: Impact of Synthesis Parameters on Crystal Properties (poster)

132. **Shen, Y.**, Le, T.T., Rimer, J.D., Novel Methods to Synthesize ZSM-11 as an Efficient Catalyst for Methanol-to-Hydrocarbon Reactions

131. **Shen, Y.**, Rimer, J.D., Optimizing ZSM-11 Catalysts for Methanol-to-Hydrocarbon Reactions (poster)

130. **Shen, Y.**, Le, T.T., Rimer, J.D., Multi-faceted Approach to Optimize ZSM-11 Catalysts for Methanol-to-Hydrocarbon Reactions

129. **Qin, W.**, Patton, M.D., Rimer, J.D., Tailoring Zeolite ZSM-5 Crystal Morphology and Spatial Distribution of Acid Sites

128. **Choudhary, M.K.**, Kumar, M., Rimer, J.D., Time-resolved In situ Studies of Zeolite Crystal Growth

127. **Choudhary, M.K.**, Kumar, M., Rimer, J.D., Elucidating Zeolite Crystal Growth Mechanisms by Atomic Force Microscopy (poster)

126. **Shete, M.**, Kumar, M., Kim, D., Rangnekar, N., Xu, D., Topuz, B., Agrawa, K.V., Karapetrova, E., Stottrup, B., Al-Thabaiti, S., Basahel, S.N., Katabathini, N., Rimer, J.D., and Tsapatsis, M., Nanoscale Control of Homoepitaxial Growth on a Two-Dimensional Zeolite

2017 North American Catalysis Society Meeting **Denver, CO**

125. **Shen, Y.**, Le, T., Rimer, J.D., Designing ZSM-11 Catalysts for Methanol to Hydrocarbon Reactions

124. Hsieh, M.F., Zhou, Y., Thirumalai, H., Grabow, L.C., **Rimer, J.D.**, Non-oxidative coupling of methane and ethylene over Ag-ZSM-5 (Poster)

123. **Qin, W.**, Patton, M.D., Rimer, J.D., Rational Design of ZSM-5 Catalysts with Tunable Morphology and Acid Site Distribution (Poster)

122. **Shen, Y.**, Le, T., Rimer, J.D., Designing ZSM-11 Catalysts for Methanol to Hydrocarbon Reactions (Poster)

2017 Southwest Catalysis Society Spring Symposium **Houston, TX**

121. **Choudhary, M.K.**, Kumar, M., Rimer, J.D., Time-resolved *In Situ* Surface Studies of Zeolite Crystal Growth

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120. **Hsieh, M.F.**, Zhou, Y. Thirumalai, H., Grabow, L.C., Rimer, J.D., Ag-Promoted Dehydroaromatization of Ethylene to Aromatics over ZSM-5 Catalysts

119. **Kumar, M.** and Rimer, J.D., Rational Design of Nanoporous Zeolite Material through Molecular Design and Mechanistic Study of Nucleation and Growth

118. **Li, R.**, Sutjianto, J., Chawla, A., Rimer, J.D., Crystallization of One-dimensional Zeolites by Nonclassical Pathways

117. **Qin, W.**, Patton, M.D., Rimer, J.D., Tailoring the Morphology and Active Site Distribution of ZSM-5 Catalysts

116. **Shen, Y.**, Le, T.T., Rimer, J.D., Optimizing ZSM-11 Catalysts for Methanol-to-Hydrocarbon Reactions

115. **Sutjianto, J.**, Li, R., Rimer, J.D., Zeolite Catalyst Design and Optimization: Impact of Synthesis Parameters on Crystal Properties

2017 University of Houston Materials Research Society **Houston, TX**

114. **Shen, Y.**, Le, T.T., Rimer, J.D., Optimizing the Physicochemical Properties of ZSM-11 for Methanol-to-Hydrocarbon Reactions

113. **Qin, W.**, Rimer, J.D., Effects of Zeolite Growth Modifiers on Different Stages of ZSM-5 Crystallization

112. **Alamani, B.G.,** Rimer, J.D., Growth modifiers of calcium oxalate monohydrate crystallization: Elucidating modifier–crystal interactions for rational drug design

111. **Sutjianto, J.**, Li, R., Rimer, J.D., Zeolite Catalyst Design and Optimization: Impact of Synthesis Parameters on Crystal Properties

110. **Zhou, Y.**, Hsieh, M.F., Thirumalai, H., Grabow, L.C., Rimer, J.D., Ag-Promoted Dehydroaromatization of Ethylene over ZSM-5 Catalysts

109. **Choudhary, M.K.**, Kumar, M., Rimer, J.D., Time-resolved *In Situ* Surface Studies of Zeolite Crystal Growth

2016 American Institute of Chemical Engineers Annual Conference **San Francisco, CA**

108. **Alamani, B.G.**, Chung, J., Rimer, J.D., *Modifiers of calcium oxalate monohydrate crystallization: Tailoring modifier–crystal interactions for rational drug design* (Oral)

107. **Qin, W.**, Rimer, J.D., *Effects of Zeolite Growth Modifiers on Different Stages of ZSM-5 Crystallization* (Oral)

106. **Qin, W.**, Rimer, J.D., *Tailoring the Physicochemical Properties of ZSM-5 with Zeolite Growth Modifiers* (CRE Poster Session)

105. **Li, R.**, Rimer, J.D., *Crystallization of One-dimensional Zeolites: Elucidating Mechanisms of Growth and the Role of Structure Direction* (Oral)

104. **Li, R.**, Rimer, J.D., *Crystallization of One-dimensional Zeolites: Elucidating Nonclassical Mechanisms of Growth and the Role of Structure Direction* (CRE Poster Session)

103. **Olafson, K.N.**, Vekilov, P.G., Rimer, J.D., *Interactions between Antimalarials and Hematin Crystal Surface Sites Determine the Mode of Growth Inhibition* (Oral)

102. **Shen, Y.**, Le, T.T., Rimer, J.D., *Optimizing the Physicochemical Properties of ZSM-11 for Methanol-to-Hydrocarbon Reactions* (Oral)

101. **Shen, Y.**, Le, T.T., Rimer, J.D., *Effect of ZSM-11 Crystal Size on Methanol-to-Hydrocarbon Reactions* (CRE Poster Session)

100. **Olafson, K.N.**, Rimer, J.D., Vekilov, P.G., *Hematin Crystallization Mechanisms Suggest How Antimalarial Drugs Operate* (Oral)

2016 Gordon Research Conference on Biomineralization **Girona, Spain**

99. **Olafson, K.N.**, Rimer, J.D., Vekilov, P.G.**,** *Decoding the Molecular Recognition between Antimalarials and Hematin Crystal Surfaces* (Poster)

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2016 18th International Conference on Crystal Growth and Epitaxy **Nagoya, Japan**

98. **Vekilov, P.G.**, Olafson, K.N., Rimer, J.D., *Kinetic Roughening via Two-dimensional Spinodal Decomposition in Hematin Crystallization*

97. **Vekilov, P.G.**, Olafson, K.N., Rimer, J.D., *Mechanisms of Inhabitation of Hematin Crystallization by Antimalarials*

2016 Department of Energy Catalysis Science PI Meeting **Gaithersburg, MD**

96. **Rimer, J.D.**, *Structure-Performance Relationships in Zeolite Catalysis: Impact of Crystal Size and Morphology in MTH* (Poster)

2016 International Symposium on Chemical Reaction Engineering **Minneapolis, MN**

95. **Hsieh, M-F.**, Grabow, L.C., and Rimer, J.D., *Designing Metal-Exchanged Zeolites for Non-Oxidative Methane Upgrade to Chemicals*, Reaction Engineering of Novel Functional Materials

2016 American Chemical Society Spring Meeting **San Diego, CA**

94. **Shen, Y.** and Rimer, J.D., *Rational Design of ZSM-11 Catalyst with Tunable Physicochemical Properties*, CATL Division

2015 American Institute of Chemical Engineers Annual Conference **Salt Lake City, UT**

93. **Li, R.,** Rimer, J.D., *Reducing Internal Mass-Transport Limitations of One-Dimensional Nanoporous Zeolites from Different Perspectives*, (219b Oral Presentation)

92. **Oleksiak, M.D.**, Rimer, J.D., *Tailoring the Physicochemical Properties of Zeolites through Organic-Free Synthesis Routes*, (327d Oral Presentation)

91. **Kumar, M.,** Luo, H., Roman, Y., Rimer, J.D., *Identifying the Mechanism of SSZ-13 Crystallization and Methods to Tailor Material Properties*, (384d Oral Presentation)

90. **Ketchum, M.**, Rimer, J.D., Vekilov, P.G., *High-Throughput Biomimetic Assay Designed to Quantify Antimalarial Efficacy*, (465a Oral Presentation)

89. **Taylor, M.G.**, Chung, J., Carnaval, I., Rimer, J.D., Mpourmpakis, G., *Kidney Stone Growth Modification: Insights from First Principles Calculations*, (659d Oral Presentation)

88. **Chung, J.**, Taylor, M.G., Carnaval, I., Mpourmpakis, G., Asplin, J.R., Rimer, J.D., *Inhibition of Calcium Oxalate Monohydrate Crystallization Using Organic Acids*, (659e Oral Presentation)

87. **Olafson, K.N.**, Vekilov, P.G., Rimer, J.D., *Mechanism of Hematin Crystallization and Inhibition in Biomimetic Solutions*, (659g Oral Presentation)

86. **Kwak, J.H.**, Fan, F., Rimer, J.D., Karande, P., *Investigation of Peptide-Mediated Crystal Habits Using a High-Content Screening Platform*, (634i Oral Presentation)

85. **Li, R.**, Rimer, J.D., *Reducing Internal Mass-Transport Limitations of One-Dimensional Nanoporous Zeolites*, (621dr, CRE Poster Session)

84. **Ghorbanpour, A.**, Rimer, J.D., Grabow, L.C., *Investigation of the Methanol-to-DME Reaction Mechanism on H-ZSM-5 Using Van Der Waals Corrected Density Functional Theory*, (630c Oral Presentation)

83. **Ghorbanpour, A.**, Gumidyala, A., Grabow, L.C., Crossley, S., Rimer, J.D., *Synthesis of ZSM-5 Nanoparticles Encapsulated within an Ultrathin Silicalite-1 Coating of Tunable Thickness*, (603b Oral Presentation)

82. **Olafson, K.N.**, Rimer, J.D., Vekilov, P.G., *Molecular Interactions at a Solid-Liquid Interface Determine the Inhibition Mechanism of Hematin Crystallization By Antimalarial Drugs*, (610f Oral Presentation)

81. **Oleksiak, M.D.**, Rimer, J.D., *Tailoring the Physicochemical Properties of Zeolites through Organic-Free Synthesis Methods*, (621ds, CRE Poster Session)

80. **Kumar, M.**, Luo, H., Roman, Y., Rimer, J.D., *Identifying the Mechanism of SSZ-13 Crystallization and Methods to Tailor Zeolite Properties*, (621ea, CRE Poster Session)

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2015 Gordon Research Conference – Nanoporous Materials & Their Applications **Holderness, NH**

79. **Oleksiak, M.D.**, Conato, M., Rimer, J.D., *Tailoring the physicochemical properties of zeolites via organic-free synthesis routes*, (Poster Presentation; selected for Short Oral Presentation)

78. **Kumar, M.**, Rimer, J.D., *Identifying the Mechanism of SSZ-13 Crystallization and Methods to Tailor Material Properties*, (Poster Presentation; selected for Short Oral Presentation)

2015 20th American Conference on Crystal Growth and Epitaxy **Big Sky, MT**

77. **Vekilov, P.G.**, Olafson, K.N., Ketchum, M.A., Rimer, J.D., *Molecular Mechanisms of Hematin Crystallization and Inhibition by Antimalarials*, (Oral Presentation)

2015 Foundations of Molecular Modeling and Simulation **Portland, OR**

76. Clark, R.J., Rimer, J.D., **Palmer, J.C.**, *Molecular Simulation of Growth Inhibitor Sorption on Zeolites*, (Poster Presentation)

2015 Texas Soft Matter Meeting **Houston, TX**

75. **Olafson, K.N.**, Rimer, J.D., Vekilov, P.G., *Classification of Antimalarial Drug Inhibition in Hematin Crystallization*, (Oral Presentation)

2015 Gordon Research Conference – Crystal Growth & Assembly **Biddeford, ME**

74. **Rimer, J.D.**, *Non-classical Crystallization Pathways: Mechanisms of Nanoporous Materials Nucleation and Growth*, (Poster Presentation)

73. **Olafson, K.N.,** Rimer, J.D., Vekilov, P.G., *Modes of Antimalarial Drug Inhibition in Hematin Crystallization*, (Poster Presentation; selected for Short Oral Presentation)

72. **Ketchum, M.A.**, Rimer, J.D., Vekilov, P.G., *Biomimetic Assay of Hematin Crystallization: A Method to Screen for Effective Antimalarial Drugs*, (Poster Presentation)

71. **Chung, J.** and Rimer, J.D**.,** *Inhibition of Calcium Oxalate Monohydrate Crystallization through Molecular Design*, (Poster Presentation)

70. **Alamani, B.G.,** Rimer, J.D., *Natural Modifiers of Calcium Oxalate Monohydrate*, (Poster Presentation)

69. **Kwak, J.H.**, Fan, F., Rimer, J.D., Karande, P., *High-content Screening to Study Peptides that Modify Crystal Habit*, (Poster Presentation)

2015 International School of Biological Crystallization (ISBC) **Grenada, Spain**

68. **Alamani, B.G.,** Rimer, J.D., *Inhibiting Calcium Oxalate Crystallization: Elucidating Modifier-Crystal Interactions*, (Poster Presentation; selected for Short Oral Presentation)

2015 24th North American Catalysis Society Meeting **Pittsburgh, PA**

67. **Kumar, M.,** Rimer, J.D.. *Tailoring the Physicochemical Properties of Zeolite Catalysts through Molecular Design*, Catalyst Design and Synthesis (Oral Presentation, #11867)

66. Kumar, M., **Rimer, J.D.**. *Time-Resolved in Situ Imaging of Zeolite Surface Growth Reveals the Mechanism of Crystallization*, Catalyst Design and Synthesis (Oral Presentation, #12054)

2015 American Chemical Society Spring Meeting **Denver, CO**

65. **Ketchum M.A.,** Rimer, J.D., Vekilov, P.G.. Physiological assay designed to quantify the efficacy and potency of antimalarials, BIOT 513, Biomolecular & Biophysical Processes

64. **Alamani, B.,** Rimer, J.D., *Ionic and molecular modifiers of calcium oxalate crystallization: Tailoring Interfacial Interactions*, COLL 502, Basic Research in Colloids, Surfactants & Nanomaterials

2014 Materials Research Society Fall Meeting **Boston, MA**

63. **Rimer, J.D.**, Kumar, M., *In Situ Imaging of Zeolite Surface Growth by Atomic Force Microscopy*, In Situ Characterization of Dynamic Processes during Materials Synthesis and Transformation

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2014 American Institute of Chemical Engineers Annual Conference **Atlanta, GA**

62. **Olafson, K.N.,** Vekilov, P.G., Rimer, J.D., *Mechanisms of beta-Hematin Crystallization and Inhibition by Antimalarial Growth Modifiers*

61. **Palmer, J.C.,** Rimer, J.D., *Simulating the Sorption of Small-Molecule Growth Modifiers on Zeolites*

60. **Kumar, M.,** Rimer, J.D., *Tailoring the Physicochemical Properties of Zeolite Catalysts through Molecular Design*

59. **Oleksiak, M.D.,** Conato, M., *Controlling Polymorphism in Organic-Free Syntheses of Zeolites*

58. **Kumar, M.,** Rimer, J.D., *Controlling the Physicochemical Properties of Zeolite Catalysts through Molecular Design*

57. **Oleksiak, M.D.,** Conato, M., Rimer, J.D.*Synthesis of Zeolite Catalysts in the Absence of Organic Structure-Directing Agents*

56. **Li, R.,** Kumar, M., Rimer, J.D., *Nonclassical Pathways of Zeolite Growth: The Transformation from Amorphous Precursors to Crystalline Products*

55. **Li, R.,** Kumar, M., Rimer, J.D., *Identifying Mechanisms of Zeolite Growth: A Pathway to Catalyst Optimization*

54. **Ghorbanpour, A.,** Rimer, J.D., Grabow, L.C., *Van der Waal Corrected First-Principles Study of the Methanol-to-DME Reaction Mechanism on H-ZSM-5*

53. **Chung, J.,** Rimer, J.D., *Controlling Crystal Habit with Tailored Organic Growth Modifiers*

52. **Aseem,** Conato, M., Harold, M.P., Rimer, J.D., Goldwin, G., *Reaction Studies of Na_2WO_4-Mn/SiO_2 Catalyst for Oxidative Coupling of Methane*

2014 Gordon Research Conference – Biomineralization **New London, NH**

51. **Rimer, J.D.,** *Role of Natural and Synthetic Modifiers of Calcium Oxalate Monohydrate Crystallization*

2014 24th American Conference on Crystal Growth and Epitaxy – West **Fallen Leaf Lake, CA**

50. **Rimer, J.D.,** *Mechanisms of Zeolite Crystallization: The Intersection of Classical and Nonclassical Pathways*

2014 Southwest Catalysis Society Meeting **Houston, TX**

49. **Oleksiak, M.D.**, Rimer, J.D., *Controlling Crystal Polymorphism in Organic-Free Syntheses of Na^+-Zeolites*

48. **Ghorbanpour, A.**, Grabow, L.C., Rimer, J.D., *Consequences of the Local Environment on the Activity of Brønsted Acid Sites in Zeolite Catalysts*

47. **Kumar, M.**, Rimer, J.D., *Tuning Physicochemical Properties of Growth Modifiers to Regulate Zeolite Crystallization*

46. **Li, R.**, Kumar, M., Rimer, J.D., *Mechanisms of Zeolite L Crystallization*

45. **Conato, M.**, Rimer, J.D., *A Multiscale Approach to the Rational Design of Zeolite Catalysts*

2014 American Chemical Society Spring Meeting **Dallas, TX**

44. **Chung, J.,** Rimer, J.D.. *Tailoring Organic Growth Modifiers of Calcium Oxalate Monohydrate Crystallization*, Inorganic Chemistry, Chemistry of Materials

43. **Rimer, J.D.**, *New Methodologies in Zeolite Synthesis and In Situ Characterization of Crystal Growth,* Division of Catalysis Science and Technology, Advances in Zeolite Catalysis and Synthesis

2013 American Institute of Chemical Engineers Annual Conference **San Francisco, CA**

42. **Rimer, J.D.**, Oleksiak, M.D.. *Designing New Platforms to Control the Properties of Zeolite Catalysts*, Catalysis with Microporous and Mesoporous Materials II (Oral Presentation)

41. **Lupulescu, A.I.,** Rimer, J.D.. *Characterizing the Temporal Evolution of Zeolite Crystallization in the Presence of Growth Modifiers*, Synthesis of Microporous and Mesoporous Materials for Catalysis (Oral Presentation)

40. **Kumar, M.,** Lupulescu, A.I., Rimer, J.D.. *Tuning the Physicochemical Properties of Growth Modifiers to Optimize Zeolite Catalysts*, Catalysis with Microporous and Mesoporous Materials IV (Oral Presentation)

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39. **Kumar, M.,** Lupulescu, A.I., Rimer, J.D.., *Tuning Physicochemical Properties of Growth Modifiers to Regulate Zeolite Crystallization* (CRE Poster Competition)

38. **Farmanesh, S.,** Rimer, J.D.. *Role of Urinary Proteins in Moderating Calcium Oxalate Kidney Stone Formation*, Engineering Fundamentals in Life Science (Poster Presentation)

37. **Farmanesh, S.,** Karande, P., Rimer, J.D.. *Rational Design of Biomimetic Crystal Modifiers: Controlling Calcium Biomineralization in Pathological Diseases*, Biomaterials I (Oral Presentation)

36. **Farmanesh, S.,** Rimer, J.D.. *Design of Biomimetic Crystal Modifiers of Calcium Biomineralization as Potential Drug Candidates for Pathological Diseases*, Materials Engineering & Sciences Division (Poster Presentation)

2013 North American Catalysis Society Meeting **Louisville, KY**

35. **Oleksiak, M.D.,** Chinta, S.**,** Rimer, J.D.. *Controlling Crystal Polymorphism in Organic-Free Syntheses of Aluminosilicate Zeolite Catalysts*, Catalyst Design and Synthesis – Zeolites I (Oral Presentation)

34. Ghorbanpour, A., **Grabow, L.G.,** Rimer, J.D.. *Tailored Catalytic Properties of MFI-Type Zeolite through Controlled Surface Modifications: Theory, Synthesis, and Catalytic Testing*, Catalyst Design and Synthesis – Zeolites III (Oral Presentation)

2013 3rd North American Symposium on Chemical Reaction Engineering **Houston, TX**

33. **Oleksiak, M.D.** and Rimer, J.D.. *Controlling Crystal Polymorphism in Organic-free Synthesis of Na^+-Zeolites,* (Poster Presentation)

32. **Lupulescu, A.I.,** Kumar, M., Rimer, J.D.. *A Novel Approach to the Rational Design of Zeolite Catalysts,* (Oral Presentation, 169)

2013 American Chemical Society Spring Meeting **New Orleans, LO**

31. **Farmanesh, S.,** Rimer, J.D.. *Synergistic Effect of Ca^{2+}-Binding Proteins on Calcium Oxalate Crystallization*, (Oral Presentation, INOR-17828)

30. **Farmanesh, S.,** Karande, P.**,** Rimer, J.D.. *Design of Biomimetic Peptides as Inhibitors of Calcium oxalate Monohydrate Crystallization,* (Oral Presentation, INOR-17760)

29. **Lupulescu, A.I.,** Kumar, M., Rimer, J.D.. *Bioinspired Approach Toward the Development of Optimized Zeolite Catalysts,* (Oral Presentation, CATL-17513)

28. **Lupulescu, A.I.,** Rimer, J.D.. *Characterizing Zeolite Growth Mechanisms Using In Situ Atomic Force Microscopy and Small-Angle Scattering,* (Oral Presentation, ANYL-17570)

27. **Lupulescu, A.I.,** Pandey, Y., Doxastakis, M., Rimer, J.D.. *Multiscale Approach to the Rational Design of Zeolite Catalysts,* (Oral and Poster Presentation, ENFL-19973)

26. **Lupulescu, A.I.,** Rimer, J.D.. *Controlling Crystal Polymorphism in Organic-free Synthesis of Na^+-Zeolites,* (Poster Presentation, CATL-17293)

25. **Kumar, M.,** Lupulescu, A.I., Rimer, J.D.. *Tuning Physicochemical Properties of Growth Modifiers to Regulate Zeolite Crystallization,* (Poster Presentation, CATL-17549)

24. **Chung, J.,** Rimer, J.D.. *Inhibition of Calcium Oxalate Monohydrate Crystallization Using Small Organic Modifiers,* (Poster Presentation, INOR-17703)

23. **Ghorbanpour, A.,** Grabow, L.C., Rimer, J.D.. *Impact of Spatial Confinement on the Activity of Brønsted Acids in Zeolite Catalysis,* (Poster Presentation, CATL-18232)

22. **Oleksiak, M.D.,** Chinta ,S., Rimer, J.D.. *Controlling Crystal Polymorphism in Organic-free Synthesis of Na^+-Zeolites,* (Poster Presentation, CATL-17293)

2012 American Institute of Chemical Engineers Annual Conference **Pittsburgh, PA**

21. **Lupulescu, A.I.,** Rimer, J.D.. *Characterizing Zeolite Surface Growth at the Microscopic Level using In Situ Atomic Force Microscopy*, (Oral Presentation)

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20. **Lupulescu, A.I.,** Rimer, J.D.. *Employing Molecular Modifiers to Tailor the Crystal Morphology of Zeolite Catalysts*, (CRE Poster Competition)

19. **Ghorbanpour, A.,** Grabow, L.C., Rimer, J.D.. *Tailored Catalytic Properties of MFI-Type Zeolite through Controlled Surface Modifications: Theory, Synthesis, and Catalytic Testing*, (Oral Presentation)

2012 Southwest Catalysis Society Meeting **Houston, TX**

18. **Ghorbanpour, A.**, Grabow, L.C., Rimer, J.D.. *Tailored Catalytic Properties of MFI Zeolite through Controlled Surface Modifications: Theory, Synthesis, and Catalytic Testing*, (Poster Presentation)

17. **Lupulescu, A.I.**, Rimer, J.D.. *Employing Molecular Modifiers to Tailor the Crystal Morphology of Zeolite Catalysts*, (Poster Presentation)

16. **Wang, D.**, Rimer, J.D., Harold, M.P.. *Towards the Design of Optimal Catalysts for Selective Catalytic Reduction of NOx: A Study of Ammonia Uptake in Cu- and Fe-ZSM-5*, (Poster Presentation)

2011 American Institute of Chemical Engineers Annual Conference **Minneapolis, MN**

15. **Lupulescu, A.I.**, Rimer, J.D.. *Tailoring the Morphology and Structure of Zeolite Catalysts through the use of Molecular Modifiers*, (Oral Presentation, 684a)

2011 Gordon Research Conference – Nanoporous Materials & Their Applications **Holderness, NH**

14. **Rimer, J.D.**, Lupulescu, A.I., Thai, N.. *Rational Design of Zeolites: A Bio-Inspired Approach to Tailor Structure-Function Properties*, (Poster Presentation)

2011 American Chemical Society Spring Meeting **Anaheim, CA**

13. **Rimer, J.D.**, An, Z., Zhu, Z., Lee, M.H., Wesson, J.A., Goldfarb, D.S., Ward, M.D.. *Tailoring L-Cystine Crystallization through Molecular Design*, (Poster Presentation)

2010 American Institute of Chemical Engineers Annual Conference **Salt Lake City, UT**

12. **Rimer, J.D.**, An, Z., Zhu, Z., Lee, M.H., Wesson, J.A., Goldfarb, D.S., Ward, M.D.. *Crystal Growth Inhibitors for the Prevention of L-Cystine Kidney Stones through Molecular Design*, (Oral Presentation)

2008 Gordon Research Conference – Biomineralization **New London, NH**

11. **Rimer, J.D.**, Wesson, J.A., Ward, M.D.. *Pathological Biomineralization of Calcium Oxalate Kidney Stones*, (Poster Presentation)

2008 American Institute of Chemical Engineers Annual Conference **Philadelphia, PA**

10. **Rimer, J.D.**, Navrotsky, A., Vlachos, D., Lobo, R.F.. *Microporous Silicate Nucleation and Growth: Mechanistic Investigations Toward Rational Design of Nanocrystalline Materials*, (Oral Presentation 122f)

9. **Rimer, J.D.**, Wesson, J.A., Ward, M.D.. *Pathological Biomineralization of Calcium Oxalate Kidney Stones*, (Oral Presentation 749g)

2007 Gordon Research Conference – Thin Film and Crystal Growth Mechanisms **South Hadley, MA**

8. **Rimer, J.D.**, Ward, M.D., Lobo, R.F., Vlachos, D.G., Navrotsky, A.. *Self-assembly and Role of Silica Nanoparticles in the Crystallization of Microporous Silicates*, (Poster Presentation)

2006 Gordon Research Conference – Colloidal, Macromolecular, & Polyelectrolyte Solutions **Ventura, CA**

7. **Rimer, J.D.**, Lobo, R.F., Vlachos, D.G.. *Self-assembly and Role of Silica Nanoparticles in the Synthesis of Microporous Silicates*, (Poster Presentation)

2005 American Institute of Chemical Engineers Annual Conference **Cincinnati, OH**

6. **Rimer, J.D.**, Lobo, R.F., Vlachos, D.G.. *Physical Basis for the Formation and Stability of Silica Nanoparticles in Basic Solutions of Monovalent Cations*, (Oral Presentation 588c)

2005 Gordon Research Conference – Zeolitic and Layered Materials **South Hadley, MA**

5. **Rimer, J.D.**, Fedeyko, J.M., Lobo, R.F., Vlachos, D.G.. *Formation and Evolution of Silica Nanoparticles in the Synthesis of Silicalite-1*, (Poster Presentation)

2005 19th North American Catalysis Society Meeting **Philadelphia, PA**

4. **Rimer, J.D.**, Lobo, R.F., Vlachos, D.G.. *Silica Nanoparticle Formation and Evolution in the Synthesis of All-Silica Zeolites*, (Oral Presentation 382)

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2004 American Institute of Chemical Engineers Annual Conference **Austin, TX**

3. **Rimer, J.D.**, Lobo, R.F., Vlachos, D.G.. *The Role of Self-Assembled Silica-Tetrapropylammonium Nanoparticles in the Growth of Silicate-1 Crystals*, (Oral Presentation 590)

2004 American Chemical Society 78th Colloid and Surface Science Symposium **New Haven, CT**

2. **Rimer, J.D.**, Lobo, R.F., Vlachos, D.G.. *The Role of Self-Assembled Silica-Tetrapropylammonium Nanoparticles in the Growth of Silicalite-1 Crystals*, (Oral Presentation 81)

2003 American Chemical Society 77th Colloid and Surface Science Symposium **Atlanta, GA**

1. **Rimer, J.D.**, Kragten, D.D., Lobo, R.F., Vlachos, D.G.. *The Growth of Zeolite Crystals From the Deposition of Subcolloidal Silica-template Nanoparticles*, (Oral Presentation 25)

INVITED TALKS

Gordon Research Conference on Crystal Growth & Assembly **Manchester, NH**

153. Rimer, J.D., *Title TBD*, June 2023

9th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT9) **Fukuoka, Japan**

152. Rimer, J.D., *Title TBD*, Keynote Lecture, July 2022

Faraday Discussions on Understanding Crystallization **Leeds, UK**

151. Rimer, J.D., *Title TBD*, Growing Crystals by Design, March 28, 2022

Chinese Zeolite Conference (21CZC) **Qingdao, China**

150. Rimer, J.D., *Recent Advancements in the Design of Zeolites with Reduced Diffusion Limitations*, Plenary Speaker, September 27 – 30, 2021

American Conference on Crystal Growth and Epitaxy (ACCGE-22) **Virtual**

149. Rimer, J.D., *Unique Mechanisms of Molecular Modifiers in Crystal Nucleation and Growth*, Fundamentals of Crystal Growth, August 2 – 4, 2021

148. Rimer, J.D., *Microfluidics as a Platform to Elucidate the Modes of Crystal Growth Modifiers*, Nucleation and Growth in Microfluidics, August 2 – 4, 2021

American Chemical Society Spring Meeting (2021) **Virtual**

147. Kim, D., Sosa, R.D., Rimer, J.D., *Crystallization in Reverse: Tailoring the Cooperative Action of Demineralizing Agents*, Crystallization Pathways: New Perspectives on Nucleation, Growth, and Dissolution of Natural and Synthetic Materials

W.R. Grace & Co. **Virtual**

146. Rimer, J.D., *Discovering New Paradigms in the Design and Preparation of Heterogeneous Catalysts*, May 2021

Catalysis Club of Chicago **Virtual**

145. Rimer, J.D., *Discovering New Paradigms in the Design and Preparation of Zeolite Catalysts*, April 12, 2021

Chevron **Virtual**

144. Rimer, J.D., *Discovering New Paradigms in the Design and Preparation of Zeolite Catalysts*, March 25, 2021

Syracuse University, Department of Biomedical and Chemical Engineering **Virtual**

143. Rimer, J.D., *Breaking the Rules of Classical Crystallization: An Unconventional Guide to Crystal Engineering*, February 19, 2021

Rice University, Department of Chemical and Biomolecular Engineering **Virtual**

142. Rimer, J.D., *Breaking the Rules of Classical Crystallization: An Unconventional Guide to Crystal Engineering*, February 16, 2021

Solvay Conference on Physics: Crystallization **Brussels, Belgium**

141. Rimer, J.D., *Title TBD*, November 2020, *Postponed to 2021 due to COVID-19*

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University of the Philippines, Department of Chemical Engineering **Virtual**

140. Rimer, J.D., *Breaking the Rules of Classical Crystallization: An Unconventional Guide to Crystal Engineering*, December 13, 2020

Philadelphia Catalysis Club **Virtual**

139. **Dai, H.**, Shen, Y., Yang, T., Lee, C., Fu, D., Agarwal, A., Le, T.T., Tsapatsis, M., Palmer, J.C., Weckhuysen, B.M., Dauenhauer, P.J., Zou, X., Rimer, J.D., *Finned Zeolite Catalysts*, Oral Talk, October 15, 2020

American Conference on Crystal Growth and Epitaxy – West **Fallen Leaf Lake, CA**

138. Rimer, J.D., Fundamentals of Crystallization, *Declined*

American Chemical Society Fall Meeting (2020) **San Francisco, CA**

137. Rimer, J.D., C1 Chemistry Session (CATL), *Declined*

136. Rimer, J.D., Hierarchical Zeolites Session, *Declined*

Workshop: Interaction of Liquid Water in Zeolite Catalysts **Bysice, Czech Republic**

135. Rimer, J.D., November 3 – 6, 2020, *Declined*

Workshop: Application of Machine Learning Algorithms to the Synthesis of Zeolites **Houston, TX**

134. Rimer, J.D., *Postponed to 2021 due to COVID-19*

American Chemical Society Spring Meeting **Philadelphia, PA**

133. Rimer, J.D., Meeting the Challenges of Heterogeneous Catalysis Controlled at Atomic Level, *Declined*

132. Rimer, J.D., Activation of light (C_1-C_4) hydrocarbons: Theory and Experiments, *Declined*

Gordon Research Conference on Crystal Engineering **Newry, ME**

131. Rimer, J.D., *Diverse and complex pathways of nanoporous aluminosilicate crystallization*, (Postponed – 2022)

Workshop on Zeolite Synthesis **Bysice, Czech Republic**

130. Rimer, J.D., June 22-25, 2020, *Declined*

ACS Colloid & Surface Science Symposium **Houston, TX**

129. Rimer, J.D., *In Situ Methods to Probe Colloidal Assembly and Interactions in Nonclassical Crystallization,* Postponed due to COVID-19, Keynote Lecture

International School of Crystallization **Granada, Spain**

128. Rimer, J.D., *Postponed due to COVID-19*

MRS Spring Meeting **Virtual**

127. Rimer, J.D., *The Diverse and Complex Nonclassical Pathways of Nanoporous Aluminosilicate Crystallization*, Crystallization via Nonclassical Pathways in Synthetic, Biogenic and Geologic Environment, November 29, 2020

AICHE Frontiers on Particle Science & Technology **Houston, TX**

126. Rimer, J.D., *Tailoring the Properties of Zeolites by Exploring Unconventional Routes in Particle Engineering*, Engineered Particles, March 31, 2020 [Virtual]

5th Euro-Asia Zeolite Conference (Keynote Lecture) **Busan, Korea**

125. Rimer, J.D., February 2020, *Declined*

Texas A&M University, Department of Chemical Engineering **College Station, TX**

124. Rimer, J.D., *Breaking the Rules of Classical Crystallization: An Unconventional Guide to Crystal Engineering*, February 5, 2020

The Academy of Medicine, Engineering & Science of Texas Annual Meeting **Dallas, TX**

123. Rimer, J.D., *New Paradigms in Crystal Engineering for Biomedical and Energy Applications*, O'Donnell Award Session, January 8, 2020

University of Delaware, Department of Chemical Engineering **Newark, DE**

122. Rimer, J.D., *Breaking the Rules of Classical Crystallization: An Unconventional Guide to Crystal Engineering*, October 18, 2019

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Philadelphia Catalysis Club **Wilmington, DE**

121. Rimer, J.D., *Discovering New Paradigms in the Design and Preparation of Heterogeneous Catalysts*, October 17, 2019

The Ohio State University, Department of Chemical Engineering **Columbus, OH**

120. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, September 19, 2019

BASF Corporation **Iselin, NJ**

119. Rimer, J.D., *Discovering New Paradigms in the Design and Preparation of Heterogeneous Catalysts*, October 2019

Materials Science and Technology Meeting **Portland, OR**

Materials Issues in Nuclear Waste Management (sponsored by NET Division, American Ceramic Society)

118. Neeway, J.J., Motkuri, R., Crum, J.V., Freeman, E., Mpourmpakis, G., Mallette, A., Rimer, J.D., *The Relationship between Zeolite Type and Glass Dissolution Rate Resumption*, September 29, 2019

University of Massachusetts Amherst, Department of Chemical Engineering **Amherst, MA**

117. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, October 29, 2019

Colorado School of Mines, Department of Chemistry **Golden, CO**

116. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, September 6, 2019

PIDC **Ann Arbor, MI**

115. Rimer, J.D., *Discovering New Paradigms in the Design and Preparation of Heterogeneous Catalysts*, August 2019 (Rescheduled)

Workshop on Functional Porous Materials (Jilin University) **Jilin, China**

114. Rimer, J.D., August 11-14, 2019, *Declined*

Albemarle **Pasadena, TX**

113. Rimer, J.D., *Discovering New Paradigms in the Design and Preparation of Heterogeneous Catalysts*, June 13, 2019

American Chemical Society Fall Meeting **San Diego, CA**

112. Rimer, J.D., *Mitigating the Effects of Diffusion Limitations in Zeolite Catalysis*, CATL Division Awards: Symposium in Honor of Francisco Zaera and Yuriy Román-Leshkov, August 25 – 29, 2019

111. Rimer, J.D., *Session on Mesoporous Materials*, August 25 – 29, 2019, Declined

110. Rimer, J.D., *Understanding the Role of Water and Other Solvents in Solid Acid-Base Catalysis*, August 25 – 29, 2019, Declined

109. Rimer, J.D., *Fundamentals of Catalysis in Nanoporous Materials*, August 25 – 29, 2019, Declined

Great Plains Catalysis Society (GPCS) Spring Symposium **Bartlesville, OK**

Plenary Speaker

108. Rimer, J.D., *New Paradigms in the Design of Zeolite Catalysts*, April 12, 2019

4th North American Symposium on Chemical Reaction Engineering (NASCRE) **Houston, TX**

Session in Honor of Dan Luss' 80th Birthday

107. Rimer, J.D., *Mitigating the Effects of Diffusion Limitations in Zeolite Catalysis*, March 10-13, 2019

American Chemical Society Spring Meeting **Orlando, FL**

Advances in Selective Oxidation Catalysis: in honor of the 2019 National Ipatieff Prize, Ive Hermans (CATL)

106. Rimer, J.D., *Elucidating Structure-Performance Relationships in Zeolite Catalysis*, March 31 – April 4, 2019

Well-Defined Materials for Heterogeneous Catalysis: Synthesis, Characterization, and Performance Studies (CATL)

Jeffrey D. Rimer

University of Houston, Department of Chemical and Biomolecular Engineering
4726 Calhoun Rd., Houston, TX 77204 : (713) 743-4131 : jrimer@central.uh.edu : www.chee.uh.edu/faculty/rimer

105. Rimer, J.D., *New Routes to Engineer the Physicochemical Properties of Zeolite Catalysts*, March 31 – April 4, 2019

Mineral Crystallization, Aggregation, and Dissolution (GEOC)

104. Rimer, J.D., *Unique Mechanisms of Molecular Modifiers in Pathological Mineralization*, March 31 – April 4, 2019

Biomaterials & Biointerfaces (COLL)

103. Rimer, J.D., *Structuring of Organic Solvents at Biointerfaces and its Ramifications for Antimalarial Inhibition of Hematin Crystallization*, March 31 – April 4, 2019

Emerging Materials for Renewable Energy (ENFL)

102. Rimer, J.D., March 31 – April 4, 2019 (Declined)

New Frontiers in the Confluence of Experimental Thermodynamics, Structural Investigations & Theory/Computation (PHYS)

101. Rimer, J.D., March 31 – April 4, 2019 (Declined)

American Physical Society (APS) Meeting **Boston, MA**

Advances in Hierarchical Systems: Theory and Experiments

100. Rimer, J.D., March 4 – 8, 2019 (declined)

Worcester Polytechnic Institute, Department of Chemical Engineering **Worcester, MA**

99. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, April 17, 2019

Georgia Institute of Technology, Department of Chemical Engineering **Atlanta, GA**

98. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, March 27, 2019

Lehigh University, Department of Chemical Engineering **Lehigh, PA**

97. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, February 13, 2019

Catalysis Society of Metropolitan New York **Somerset, NJ**

96. Rimer, J.D., *New Paradigms in the Design of Zeolite Catalysts*, January 23, 2019

University of Illinois, Department of Chemical Engineering **Urbana-Champaign, IL**

95. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, December 11, 2018

SABIC Americas **Sugar Land, TX**

94. Rimer, J.D., *Discovering New Paradigms in the Design and Preparation of Heterogeneous Catalysts*, November 26, 2018

Association of Crystallization Technology Larson Workshop **Cambridge, MA**

93. Rimer, J.D., *Developing New Tools to Characterize Zeolite Crystallization: The Trials and Tribulations of a Nonclassical Scientist*, Session on "Learning from Failure", September 30, 2018

University of Minnesota, Department of Chemical Engineering & Materials Science **Minneapolis, MN**

92. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, September 6, 2018

American Institute of Chemical Engineers Annual Conference **Pittsburgh, PA**

Session in Honor of Michael Smith's 60th Birthday

91. Rimer, J.D., *Exploiting Mesoporosity for the Design of Novel Materials*, October 2018

Goldschmidt **Boston, MA**

90. Rimer, J.D., *Elucidating the Thermodynamic and Kinetic Factors Governing Zeolite Crystallization*, Energy Landscapes in Biomineralization, Geochemistry, and Materials Science: A Celebration of Alex Navrotsky's 75th Birthday, August 12, 2018

Jeffrey D. Rimer

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American Chemical Society Fall Meeting **Boston, MA**

89. Session on "Mechanistic Understanding of Mineral Growth and Dissolution" (Declined Invitation)

88. Session on "Meeting the Challenges of Heterogeneous Catalysis Controlled at Atomic Level" (Declined Invitation)

Future Directions in Synthetic Biology for Energy Storage and Power Delivery **Arlington, VA**

87. Invitation to Participate in Workshop, March 6-7, 2018 (Declined Invitation)

Gordon Research Conference on Biomineralization **New London, NH**

86. Rimer, J.D., Developing Preventative Therapies for Kidney Stone Disease: New Approaches to Inhibit Calcium Oxalate Crystallization, July 29 – August 3, 2018

Gordon Research Conference on Catalysis **New London, NH**

85. Rimer, J.D., Synthesis by Design: New Methods to Tailor the Physicochemical Properties of Catalysts, June 24 – 29, 2018

American Chemical Society Spring Meeting **New Orleans, LA**

84. Rimer, J.D., Li, R., Kumar, M., Qin, W., Chawla, A., *Cooperative Effects of Structure-Directing Agents in Zeolite Synthesis*, *Invited Speaker*, Control of Zeolite Structure, Composition and Sites for Catalysis, March 18 – 22, 2018

83. Rimer, J.D., Chawla, A., Li, R., Palmer, J.C., Garcia-Martinez, J., *Dual Roles of Surfactants in Zeolite Synthesis: Directors and Disruptors of Crystal Structure*, *Keynote Speaker*, Symposium in Honor of the Kathryn C. Hach Award for Entrepreneurial Success, March 18 – 22, 2018

American Physical Society (APS) Meeting **Los Angeles, CA**

Self-assembly of Nano-structured, Macromolecular, and Nanoporous Materials

82. Rimer, J.D., *Controlled Assembly of Nanoporous Materials: Addressing the Voids in our Understanding of Zeolite Crystallization*, March 6, 2018

Weizmann Institute of Science, Department of Chemistry **Rehovot, Israel**

81. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, (Delayed Invite)

International Symposium on Zeolites and Microporous Crystals **Yokohama, Japan**

80. Rimer, J.D., Keynote Lecture, *Cooperative Effects of Inorganic and Organic Structure-Directing Agents in Zeolite Synthesis*, August 5, 2018

American Institute of Chemical Engineering Annual Meeting **Minneapolis, MN**

79. Rimer, J.D., FRI/John G. Kunesh Award Lecture: In Search of New Paradigms for Crystal Engineering: Old Tricks, Novel Discoveries, and Future Challenges, (63d) Separations Division Plenary: Gerhold and Kunesh Awards (FRI/Kunesh Award Lecture), October 30, 2017

European Association of Urology Section of Urolithiasis **Vienna, Austria**

78. Scientific Basis for Understanding Stone Formation, October 5 – 7, 2017 (Declined Invitation)

University of Houston, Materials Science and Engineering Seminar **Houston, TX**

77. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, November 29, 2017

254th American Chemical Society Fall Meeting **Washington DC**

76. Nanoporous Materials for Catalysis in Global Economy" in the "Division of Catalysis Science and Technology, August 20 – 24, 2016 (Declined Invitation)

Department of Energy Workshop **Gaithersburg, MD**

75. Basic Research Needs: Catalysis Science to Transform Energy Technologies, May 8 – 10, 2016 (Declined Invitation)

Virginia Tech, Department of Chemistry **Blacksburg, VA**

74. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, Highlands in Chemistry Seminar Series, December 1, 2017

Jeffrey D. Rimer

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UOP-Honeywell Research Center **Des Plaines, IL**

73. Rimer, J.D., *Understanding Zeolite Crystallization: New Methods to Identify Mechanisms of Growth, Tailor Physicochemical Properties, and Elucidate Structure-Performance Relationships*, November 15, 2017

Goldschmidt 2017 **Paris, France**

72. ***New Insights into the Early Stages of Mineral Formation: Prenucleation Clusters, Dense Liquid Phases, (Amorphous) Nanoparticles and Beyond…***
Rimer, J.D., Invited Keynote Lecture (Declined Invitation)

Politecnico di Milano **Milan, Italy**

71. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Energy and Biomedical Applications*, July 11, 2017

CECAM Workshop **Lausanne, Switzerland**

70. ***Building Links between Experiments and Computer Simulations of Crystallization***
Rimer, J.D., *Complex Mechanisms of Zeolite Crystallization*, July 13, 2017

University of Twente **Enschede, Netherlands**

69. Rimer, J.D., *Integrated Approaches to Design and Characterize Zeolite Catalysts*, Multiscale Catalytic Energy Conversion (MCEC) Lecture Series, May 2017

Eindhoven University of Technology **Eindhoven, Netherlands**

68. Rimer, J.D., *Integrated Approaches to Design and Characterize Zeolite Catalysts*, Multiscale Catalytic Energy Conversion (MCEC) Lecture Series, May 2017

Utrecht University **Utrecht, Netherlands**

67. Rimer, J.D., *Integrated Approaches to Design and Characterize Zeolite Catalysts*, Multiscale Catalytic Energy Conversion (MCEC) Lecture Series, May 2017

Ecole Polytechnique Federale de Lausanne (EPFL) Valais Wallis **Sion, Switzerland**

66. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, May 18, 2017

University of Virginia, Department of Chemical Engineering **Charlottesville, VA**

65. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, April 13, 2017

Pennsylvania State University, Department of Chemical Engineering **State College, PA**

64. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, March 20, 2017

University of Houston First Look Symposium **Houston, TX**

63. Rimer, J.D., *New Paradigms in Nanoporous Materials Synthesis: Insight for Rational Design*, February 28, 2017

University of Texas Southwestern, School of Medicine **Dallas, TX**

62. Rimer, J.D., *Designing New Approaches to Prevent Pathological Crystallization*, February 24, 2017

University of Wisconsin, Department of Chemical Engineering **Madison, WI**

61. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, February 14, 2017

NSF and DOE, Modular Manufacturing Workshop (MMW) **Washington DC**

60. Rimer, J.D., *Cross-Cutting Technologies*, January 18, 2017 (Declined Invitation)

The Academy of Medicine, Engineering, & Science of Texas Annual Meeting **San Antonio, TX**

59. Invited Participant, January 10 – 12, 2017

American Institute of Chemical Engineers Annual Conference **San Francisco, CA**

MESD Plenary Session (Owens Corning Early Career Award Lecture)

58. Rimer, J.D., *New Paradigms in Crystal Engineering: Tailoring the Physicochemical Properties of Materials for Chemical and Biomedical Applications*, November 16, 2016

Jeffrey D. Rimer

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4726 Calhoun Rd., Houston, TX 77204 : (713) 743-4131 : jrimer@central.uh.edu : www.chee.uh.edu/faculty/rimer

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American Chemical Society Southwest Regional Meeting **Galveston, TX**

57. Chung, J., Granja, I., Taylor, M.G., Mpourmpakis, G., Asplin, J.R., and Rimer, J.D., Molecular Modifiers Reveal a Mechanism of Pathological Crystal Growth Inhibition, Aggregation of Biological Molecules, November 10, 2016

Association of Crystallization Technology Larson Workshop **Princeton, NJ**

56. Rimer, J.D., *Designing Commercially-relevant Methods to Optimize Zeolite Crystallization, Crystallization across Industries*, November 1, 2016

University of California at Santa Barbara, Department of Chemical Engineering **Santa Barbara, CA**

55. Duncan and Suzanne Mellichamp Emerging Leader Lecture (Inaugural Speaker)
Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, October 25, 2016

18th International Conference on Crystal Growth and Epitaxy **Nagoya, Japan**

54. Rimer, J.D., *Invited Lecture,* In Situ Observation and Characterization Session *(Declined Invitation)*

W.R. Grace and Company **Columbia, MD**

53. Rimer, J.D., *Identifying New Paradigms in Zeolite Crystal Engineering*, July 29, 2016

EMN Meeting on Mesoporous Materials **Yokohama, Japan**

52. Rimer, J.D., *Invited Lecture (Declined Invitation)*

5th Workshop on "Zeolites: Perspectives and Challenges" **Caen, France**

51. Rimer, J.D., *Identifying New Paradigms in Zeolite Crystal Engineering*, Laboratory of Catalysis & Spectrochemistry Symposium, *Keynote Lecture*, April 25, 2016

American Chemical Society Spring Meeting **San Diego, CA**

50. Rimer, J.D., *Advanced Synthesis Methods and Structure-Performance Relationships in Zeolite Catalysis, Division of Catalysis Science and Technology,* Ipatieff Prize Symposium in Honor of Aditya Bhan, March 14, 2016

University of Toledo, Department of Chemical and Environmental Engineering **Toledo, OH**

49. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, February 18, 2016

Texas Tech University, Department of Chemical Engineering **Lubbock, TX**

48. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, November 20, 2015

American Institute of Chemical Engineers Annual Conference **Salt Lake City, UT**

47. **Rimer, J.D.,** Grabow, L.C., *Designing Metal-Exchanged Zeolites for Non-Oxidative Methane Upgrade to Chemicals*, Frontier Catalysis Research for Methane Conversion to Chemicals, November 9, 2015

Goldschmidt 2015 **Prague, Czech Republic**

46. **Zeolites and Glass Alteration Products: Formation and Stability in Alkaline Environments**
Rimer, J.D., *Keynote Lecture (Declined Invitation)*

20th American Conference on Crystal Growth and Epitaxy **Big Sky, MT**

45. Rimer, J.D., *Non-Classical Pathways of Nanoporous Zeolite Crystallization*, August 3, 2015

Gordon Research Conference on Crystal Growth & Assembly **Biddeford, ME**

44. Rimer, J.D., *Controlling Crystallization with Molecular Modifiers: Exploring New Pathways to Prevent Pathological and Infectious Diseases*, June 28, 2015

Gordon Research Conference on Nanoporous Materials & Their Applications **Holderness, NH**

43. Rimer, J.D., *Elements of Rational Design: New Approaches to Tailor Zeolite Crystallization*, August 13, 2015

International Symposium on Zeolites and Microporous Crystals **Sapporo, Japan**

42. Rimer, J.D., *Keynote Lecture,* June 29, 2015 (Declined Invitation)

Massachusetts Institute of Technology, Department of Chemical Engineering **Cambridge, MA**

41. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering*, May 1, 2015

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North East Corridor Zeolite Association **Philadelphia, PA**

40. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, December 12, 2014

Zeolyst International **Conshohocken, PA**

39. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, December 11, 2014

University of Pittsburgh, Department of Chemical Engineering **Oakland, PA**

38. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, November 7, 2014

ExxonMobil Active Materials Conference **Hershey, PA**

37. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, October 20, 2014

University of Colorado, Department of Chemical and Biological Engineering **Boulder, CO**

36. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, September 23, 2014

Tulane University, Department of Chemical Engineering **New Orleans, LA**

35. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, September 5, 2014

American Chemical Society Fall Meeting **San Francisco, CA**

34. Rimer, J.D.. *Enhancing the Performance of Zeolite Catalysts through Rational Design*, Division of Catalysis Science and Technology, Catalysis for Biomass Conversion, 2014

33. Rimer, J.D. and Motkuri, R.K., *Identifying Zeolite Frameworks for Enhanced CO_2 Capture and Separation Applications*, Division of Energy & Fuels, Carbon Dioxide Management: Recent Advances in Carbon Dioxide Capture, Conversion, Utilization and Storage, 2014

Pacific Northwest National Laboratories **Richmond, WA**

32. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, February 28, 2014

American Institute of Chemical Engineers Southwest Texas Section Meeting **Houston, TX**

31. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, January 9, 2014

American Institute of Chemical Engineers Annual Conference **San Francisco, CA**

30. Future Directions in Reaction Engineering, Invited Speaker, *Identifying Paradigms in Catalyst Design: An Overview of New Approaches and Future Challenges to Tailor Catalyst Properties and Performance*, 2013

American Chemical Society Fall Meeting **Indianapolis, IN**

29. Rimer, J.D., *Rational Design of Zeolites for Enhanced Production of Energy, Fuels, and Chemicals*, 17390, Porous Materials for Energy Conversion and Storage, Division of Energy and Fuels, 2013

Albemarle Corporation **Pasadena, TX**

28. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, January 29, 2014

U.S. DOE Workshop, Particle Mediated Growth **Berkeley, CA**

27. Rimer, J.D., *Mechanisms of Zeolite Crystallization*, December 12-14, 2013

University of California at Berkeley, Department of Chemical Engineering **Berkeley, CA**

26. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, December 11, 2013

University of Delaware, Department of Chemical and Biomolecular Engineering **Newark, DE**

25. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, November 22, 2013

Villanova University, Department of Chemical Engineering **Villanova, PA**

24. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical*

Jeffrey D. Rimer

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Applications, November 21, 2013

University of Notre Dame, Department of Chemical and Biomolecular Engineering **South Bend, IN**

23. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, November 12, 2013

Chevron Energy and Technology Company **Richmond, CA**

22. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, November 6, 2013

George Washington University, Department of Chemistry **Washington, DC**

21. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, October 11, 2013

Georgetown University, Department of Chemistry **Washington, DC**

20. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, October 10, 2013

ExxonMobil Chemical, Global Chemical Research **Baytown, TX**

19. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, October 3, 2013

NALCO – An Ecolab Company, RD&E Colloidal Technologies **Naperville, IL**

18. Rimer, J.D., *Discovering New Paradigms in Zeolite Synthesis through Rational Design*, September 19, 2013

The University of Oklahoma, Department of Chemical, Biological, and Materials Engineering **Norman, OK**

17. Rimer, J.D., *Identifying New Paradigms in Crystal Engineering for Catalysis and Biomedical Applications*, September 5, 2013

The Methodist Hospital Research Institute, Texas Medical Center **Houston, TX**

16. Rimer, J.D., *Designing Novel Drugs for Pathological and Infectious Diseases*, October 24, 2012

University of the Philippines, Department of Chemical Engineering **Diliman, Philippines**

15. Rimer, J.D., *Engineering New Drug Targets for Pathological and Infectious Diseases*, August 6, 2012

14. Rimer, J.D., *Designing New Platforms to Optimize the Synthesis of Nanoporous Catalysts*, August 8, 2012

University of the Philippines, School of Medicine **Manila, Philippines**

13. Rimer, J.D., *Rational Drug Design for Pathological and Infectious Diseases*, August 10, 2012

Fritz Haber Institute, Max Planck Society, Department of Inorganic Chemistry **Berlin, Germany**

12. Rimer, J.D., *Rational Design of Zeolite Catalysts: New Platforms to Tailor Crystal Habit and Polymorphism*, 2012

Politecnico di Milano, Department of Energy **Milan, Italy**

11. Rimer, J.D., *Rational Design of Zeolite Catalysts: New Platforms to Tailor Crystal Habit and Polymorphism*, 2012

Asian Crystallographic Technology Society (ACTS) Symposium **Seoul, South Korea**

10. Rimer, J.D., *(Invited) Bio-Inspired Design of Crystal Growth Inhibitors for the Prevention of Kidney Stones*, 2012

Champion Technologies **Houston, TX**

9. Rimer, J.D., *Crystal Engineering: Colloidal and Interfacial Design of Materials*, February 6, 2012

American Institute of Chemical Engineers Annual Conference **Minneapolis, MN**

8. Rimer, J.D., *Invited Lecture: Bio-Inspired Design of Microporous Materials*, 2011 (Presentation 266b)

Rensselaer Polytechnic University, Department of Chemical Engineering **Troy, NY**

7. Rimer, J.D., *Crystal Engineering: Rational Approaches in Bio- and Nanoporous Materials Design*, August 12, 2011

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Soongsil University, Department of Chemical Engineering **Seoul, South Korea**

6. Rimer, J.D., *Crystal Engineering: Rational Approaches in Materials Design,* July 15, 2011

Total Petrochemicals USA, Inc., Research and Technology Center **Deer Park, TX**

5. Rimer, J.D., *Crystal Engineering and Nanomaterials*, February 11, 2011

Centre Européen de Calcul Atomique et Moléculaire (CECAM) Workshop **Lyon, France**

4. **"Computational Aspects of Building Blocks, Nucleation and Synthesis of Porous Materials"**
Rimer, J.D., Lobo, R.F., Vlachos, D.G.. *Self-assembly and Role of Silica Nanoparticles in the Nucleation and Growth of Silicalite-1*, 2006

Chevron Texaco **Richmond, CA**

3. Rimer, J.D., Fedeyko, J.M., Roth, D.D., Vlachos, D.G., Lobo, R.F.. *Self-assembly and Role of Silica Nanoparticles in the Synthesis of Silicalite-1*, 2006

Center for Catalytic Science and Technology, University of Delaware **Newark, DE**

2. Rimer, J.D., Lobo, R.F., Vlachos, D.G.. *The Role of Silica Nanoparticles in the Growth of Microporous Silicate Materials*, 2004

National Institute of Standards and Technology **Gaithersburg, MD**

1. Rimer, J.D., Fedeyko, J.M., Lobo, R.F., Vlachos, D.G.. *The First Stage of Microporous Silicate Growth: Characterization of Silica Nanoparticle Precursors and the Role of Nanoparticles in the Growth Mechanism of Silicalite-1*, 2004

LEADERSHIP AND SERVICE

Journal Editorial Staff and Advisory Boards

Crystal Growth & Design (ACS), Associate Editor 2021 – present

Reaction Chemistry & Engineering (Royal Society of Chemistry), Advisory Board

Molecular Systems Design & Engineering (Royal Society of Chemistry), Advisory Board

AIChE Journal (Wiley Publishing), Advisory Board

Philippine Engineering Journal (National Engineering Center), Advisory Board

Gordon Research Conference Chair

Nanoporous Materials & Their Applications, 2021

Crystal Growth & Assembly, 2019

Executive Committees

Southwest Catalysis Society, Past Chair (2017 – 2018); Chair (2016 – 2017); Chair-Elect (2015 – 2016); Secretary (2014 – 2015); Director (2012 – 2014)

International Zeolite Association Council, Treasurer (2019 – Present)

International Zeolite Association Synthesis Commission, Co-Chair (2016 – Present)

AIChE Materials, Engineering, and Sciences Division (MESD), Director (2017 – 2019)

American Associate for Crystal Growth, Executive Committee (2017 – 2019)

North American Symposium on Reaction Engineering (NASCRE-4), Scientific Committee (2019)

Association for Crystallization Technology, Steering Committee (2018 – Present)

University of Houston Committees

Promotion and Tenure Committee, Chair (2019 – 2020); Member (2018 – 2019)

Deans Review Committee, Member (2019)

Cougar Initiative to Engage (CITE) Advisory Committee, Member (2018 – 2019)

EHLS Safety Committee, Member (2019 – 2020)

NSF MRSEC Proposal, Director (2019)

Chemical Engineering Graduate Program, Coordinator (2019 – present)

Chemical Engineering Safety Officer, Chair (200x – 2019)

Chemical Engineering Communications Officer, Chair (200x – 2019)

Chemical Engineering Faculty Search Committee, Member (2020); Chair (2015 – 2017)

Mentorship

Advisor for the Organization of Graduate Chemical Engineering Students, U. Houston (2012 – 2017)

Lemelson-MIT InvenTeam Mentor (2014 – Present), high school innovation and research program

Founder of the KIPP:UH STEM Alliance, Outreach Program between KIPP HHS and U. Houston (2010 – Present)

Undergraduate and Graduate Research Mentor, New York University (2007 – 2009)

President of the Chemical Engineering graduate student organization, University of Delaware (2002 – 2005)

Undergraduate Research Mentor, University of Delaware (2002 – 2005)

Reviewer for 50+ Journals: ACS Applied Materials & Interfaces, ACS Catalysis, ACS Central Science, ACS Nano, Advanced Materials, Angewandte Chemie International Edition, Chemistry of Materials, Crystal Growth & Design, Journal of the American Chemical Society, Journal of Catalysis, Langmuir, Nature, Nature Catalysis, Nature Chemistry, Nature Communications, Nature Materials, Proceedings of the National Academy of Sciences, Science, Small, etc.

Panel Reviewer: National Science Foundation, Department of Energy, American Chemical Society, Israel Science Foundation, Austrian Science Fund, Lawrence Berkeley National Laboratory

American Institute of Chemical Engineers Annual Conference, MESD and CRE Divisions

Co-Chair, "In Honor of Michael Smith's 60th Birthday" (2018)

Chair/Co-Chair, "Catalysis with Microporous and Mesoporous Materials" (2010 – 2013)

Co-Chair, "In Honor of the R.H. Wilhelm Award Winner" (2012)

Chair, "Advances in Biomaterial Evaluation" (2012)

Chair/Co-Chair, "Advances in the Synthesis of Porous Inorganic Materials" (2010 – 2014)

Session Organizer at National Meetings

American Chemical Society, Fall Meeting (San Diego, CA), Session in CATL Division Awards: Symposium in Honor of Francisco Zaera and Yuriy Román-Leshkov (2019), Session in CATL Division Awards: Symposium in Honor of Dion Vlachos and Raj Gounder (2021)

Goldschmidt (Boston, MA), Session in Honor of Alex Navrotsky's 75th Birthday (2018)

American Conference on Crystal Growth and Epitaxy – West (Fallen Leaf Lake, CA), "Fundamentals of Crystallization" (2014)

Materials Research Society, Fall Meeting (Boston, MA), "In Situ Characterization of Dynamic Processes During Self-Assembly, Crystallization, and Phase Transformations" (2014)

American Chemical Society, Spring Meeting (Dallas, TX), "Advances in Zeolite Catalysis and Synthesis" (2014)

Materials Research Society, XXII International Materials Research Congress (Cancun, Mexico), "Materials for Environmental Remediation and Sensing" (2013)

PROFESSIONAL AND SCIENTIFIC SOCIETIES

American Institute of Chemical Engineers (AIChE), American Chemical Society (ACS), American Society of Engineering Education (ASEE), American Associate for Crystal Growth (AACG), Association for Crystallization Technology (ACT), Materials Research Society (MRS), American Association for the Advancement of Science (AAAS),

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Southwest Catalysis Society (SCS), North American Catalysis Society (NACS), New York Academy of Sciences (NYAS), Philadelphia Catalysis Club, Tau Beta Pi National Engineering Honor Society, Sigma Xi Scientific Research Society, Omega Chi Epsilon National Chemical Engineering Honor Society, Lambda Sigma National Honor Society, Phi Beta Kappa National Honor Society, Omicron Delta Kappa National Leadership Honor Society.

TEACHING EXPERIENCE

University of Houston, Department of Chemical and Biomolecular Engineering

Fall 2021	Unit Operations, CHEE 3462, Instructor
Spring 2021	Unit Operations, CHEE 3462, Instructor
Fall 2020	Chemical Reaction Engineering, CHEE 4367, Instructor
Spring 2020	Topics in Colloids and Interface Science, CHEE 6322, Instructor
Spring 2020	Experimental Methods, CHEE 6327, Contributor for X-Ray Diffraction
Spring 2019	Unit Operations, CHEE 3462, Instructor
Fall 2018	Unit Operations, CHEE 3462, Instructor
Spring 2018	Topics in Colloids and Interface Science, CHEE 6322, Instructor
Spring 2018	Experimental Methods, CHEE 6327, Contributor for X-Ray Diffraction
Fall 2017	Chemical Reaction Engineering, CHEE 4367, Instructor
Spring 2017	Applications of Heterogeneous Catalysis, Short Course, Contributor
Fall 2016	Chemical Reaction Engineering, CHEE 4367, Instructor
Spring 2016	Chemical Engineering Thermodynamics I, CHEE 2332, Instructor
Fall 2015	Topics in Colloids and Interface Science, CHEE 6322, Instructor
Fall 2015	Chemical Engineering Challenges, CHEE 1131, Contributor for Nanomaterials Section
Spring 2015	Chemical Engineering Thermodynamics I, CHEE 2332, Instructor
Spring 2015	Applications of Heterogeneous Catalysis, Short Course, Contributor
Fall 2014	Chemical Engineering Challenges, CHEE 1131, Contributor for Nanomaterials Section
Fall 2014	Chemical Engineering Thermodynamics I, CHEE 2332, Instructor
Spring 2014	Unit Operations, CHEE 3462, Instructor
Spring 2014	Experimental Methods, CHEE 6327, Contributor for X-Ray Diffraction
Fall 2013	Topics in Colloids and Interface Science, CHEE 6322, Instructor
Fall 2013	Chemical Engineering Challenges, CHEE 1131, Contributor for Nanomaterials Section
Spring 2013	Unit Operations, CHEE 3462, Instructor
Spring 2013	Applications of Heterogeneous Catalysis, Short Course, Contributor
Fall 2012	Unit Operations, CHEE 3462, Instructor
Fall 2012	Chemical Engineering Challenges, CHEE 1131, Contributor for Nanomaterials Section
Spring 2012	Unit Operations, CHEE 3462, Instructor
Fall 2011	Topics in Colloids and Interface Science, CHEE 6397, Instructor
Spring 2011	Unit Operations, CHEE 3462, Instructor
Fall 2010	Chemical Reaction Engineering, CHEE 4367, Instructor
Fall 2009	Topics in Colloids and Interface Science, CHEE 6397, Instructor

University of the Philippines, Department of Chemical Engineering

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Summer 2012 Materials Science and its Applications in Chemical Engineering, ChE 298/198, Instructor

University of Delaware, Department of Chemical Engineering

Spring 2004 Fluid Mechanics, CHEG 341, Teaching Assistant

Fall 2003 Introduction to Chemical Engineering, CHEG 112, Teaching Assistant

Allegheny College, Department of Chemistry

1998 – 1999 Introductory Chemistry Laboratory, CHEM 102, Teaching Assistant

Fall 1998 Introductory Chemistry Laboratory, CHEM 116, Teaching Assistant

STUDENT SUPERVISION

Postdoctoral Fellows (10): Seung Hyeok Cha, Madhuresh Choudhary, Marlon T. Conato, Xi Geng, Sungmin Han, Ming-Feng Hsieh, Elena V. Petrova, Seungwan Seo, Mariano Susman, Weiwei Tang

Graduate Students (35): Bryan Alamani (PhD, 2018), Abdullah Al-Thobaity (2020), Vraj Chauhan, Dipayan Chakraborty, Aseem Chawla (PhD, 2020), Madhuresh Choudhary (PhD, 2019), Jihae Chung (PhD, 2017), Heng Dai, Mangalaa Dinivahi (MS, 2020), Sahar Farmanesh (PhD, 2013), Muhammad Fiji, Arian Ghorbanpour (PhD, 2015), Chengfei Huang, Rishabh Jain, Megan Ketchum (PhD, 2016), Doyoung Kim, Manjesh Kumar (PhD, 2016), Thuy T. Le (PhD, 2020), Rui Li (PhD, 2017), Yu Liang, Alexandra I. Lupulescu (PhD, 2013), Wenchuan Ma, Adam Mallette, Zhiyin Niu, Katy N. Olafson (PhD, 2017), Matthew D. Oleksiak (PhD, 2016), Deependra Parmar, Yufeng Shen (PhD, 2018), Kumari Shilpa, Ricardo Sosa, Danyi Sun (2021), Wei Qin (PhD, 2018), Di Wang (MS, 2012), Xiaohui Zhao, Yunwen Zhou (PhD, 2020)

Undergraduate Students (37): Amir Abu-Talib, Temitope Ajala, Oluwapelumi Esther Akinwande, Maneesh Anand, Ashwin Antony, Christopher Arienza, Zachery Baker, Julieanne Baldwin, Raghav Baskar, Diego Campanella, Alison Chan, Jakob Claret, Mangalaa Dinivahi, Rosendo Garcia, Diego Guala, Megan Ketchum, Nam Le, James Lee, Eduardo Lyra, Miguel Maldonado, Brandon Melendez, Karla Munoz, Madhu Natarajan, Amy Nguyen, Hang Nguyen, Khoa Nguyen, Vivian Nguyen, Kristen Nordstrom, Matthew Patton, Gautham Prakash, Stephanie Roohi, James Sutjianto, Jakob Truong, Wei Qin, Ricardo Sosa, Aakash Srikanth, Olivia Williams, Zheng Zhao

High School Students (6): Elliot Landon, Nhan Thai, Paschalis Economou, Royce Shen, Rakan Jabareen, Evan Lu

GRADUATE AND UNDERGRADUATE STUDENT AWARDS AND HONORS

- 120, 2021 UH Summer Undergraduate Research Fellowship, Khoa Nguyen
- 119, 2021 ACS Applied Materials & Interfaces #MyACSAMI video competition winner, Ricardo Sosa
- 118, 2020 Best Dissertation Award, Department of Chemical and Biomolecular Engineering, Aseem Chawla
- 117, 2020 AIChE Graduate Student Award Competition in the Inorganic Chemistry, 2nd Place, Rishabh Jain
- 116, 2020 AIChE Materials Engineering and Science Division 3rd Place Poster Award, Ricardo Sosa
- 115, 2020 AIChE CRE Travel Award, Heng Dai
- 114, 2020 AIChE CRE Travel Award, Xiaohui Zhao
- 113, 2020 Best Dissertation Award, Cullen College of Engineering, Aseem Chawla
- 112, 2020 Great Plains Catalysis Society Fall Online Symposium Poster Award, Heng Dai
- 111, 2020 University of Houston PROMES Scholarship, Oluwapelumi Esther Akinwande
- 110, 2020 University of Houston Cougar Athletic Alliance Scholarship, Oluwapelumi Esther Akinwande
- 109, 2020 Society of Women Engineers (SWE) Scholar, Oluwapelumi Esther Akinwande
- 108, 2020 17th International Congress on Catalysis Travel Award, Heng Dai
- 107, 2019 Society of Plastic Engineers (SPE) Scholarship, UH Student Chapter, Aseem Chawla

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- 106, 2019 PURS Fellowship, University of Houston, Jakob Claret
- 105, 2019 AIChE CRE Poster Award (First Place), Yunwen Zhou
- 104, 2019 UH Cullen Fellowship Travel Grant, Doyoung Kim
- 103, 2019 Best Poster Award, *Southwest Catalysis Society Fall Symposium*, Aseem Chawla
- 102, 2019 Organization for Chemical Engineering Graduate Students Symposium Poster Award, Ricardo Sosa
- 101, 2019 AIChE CRE Travel Award, Rishabh Jain
- 100, 2019 UH Cullen Fellowship Travel Grant, Aseem Chawla
- 99, 2019 Best Poster Award, *Southwest Catalysis Society Spring Symposium*, Thuy T. Le
- 98, 2019 Best Poster Award, *Southwest Catalysis Society Spring Symposium*, Aseem Chawla
- 97, 2019 Best Poster Award, *Southwest Catalysis Society Spring Symposium*, Yunwen Zhou
- 96, 2019 National Science Foundation Graduate Research Fellowship, James Sutjianto
- 95, 2019 Kokes Travel Award, 25th North American Catalytic Society Meeting, Thuy T. Le
- 94, 2019 SURF Scholarship, University of Houston, Jakob Claret
- 93, 2019 NASCRE-4 Graduate Student Travel Award, Thuy T. Le
- 92, 2019 GRC Carl Storm Underrepresented Minority Fellowship, Ricardo Sosa
- 91, 2019 PURS Fellowship, University of Houston, Nam Le
- 90, 2018 American Society of Indian Engineers and Architects (ASIE) Scholarship, Aseem Chawla
- 89, 2018 Postdoctoral Career Enhancement Award, University of Houston, Mariano Susman
- 88, 2018 UH Cullen Fellowship Travel Grant, Madhuresh Choudhary
- 87, 2018 AIChE Materials Engineering and Science Division 2nd Place Graduate Student Award, Aseem Chawla
- 86, 2018 AIChE Materials Engineering and Science Division 2nd Place Poster Award, Aseem Chawla
- 85, 2018 AIChE Materials Engineering and Science Division 3rd Place Poster Award, Ricardo Sosa
- 84, 2018 Society of Women Engineers (SWE) scholar, Oluwapelumi Esther Akinwande
- 83, 2018 Organization for Chemical Engineering Graduate Students Symposium Poster Award, Ricardo Sosa
- 82, 2018 Engineering Leadership Board Poster Presentation (selected poster), Amy Nguyen
- 81, 2018 AIChE CRE Travel Award, Aseem Chawla
- 80, 2018 National Society of Black Engineers (NSBE)-Houston-Sasol Scholar, Oluwapelumi Esther Akinwande
- 79, 2018 UH Cullen Fellowship Travel Grant, Bryan Alamani
- 78, 2018 Poster Award, *26th AACGE Western Section Conference on Crystal Growth & Epitaxy*, Wenchuan Ma
- 77, 2018 BP Scholar, Oluwapelumi Esther Akinwande
- 76, 2018 Best Poster Award, *Southwest Catalysis Society Symposium*, Wei Qin
- 75, 2018 Best Poster Award, *Southwest Catalysis Society Symposium*, Yufeng Shen
- 74, 2018 UH Summer Undergraduate Research Fellowship, Amy Nguyen
- 73, 2018 MD Anderson CPRIT CURE Summer Program, Oluwapelumi Esther Akinwande
- 72, 2017 UH Cullen Fellowship Travel Grant, Wei Qin
- 71, 2017 AIChE CRE Poster Award, Rui Li
- 70, 2017 Best Dissertation Award, Cullen College of Engineering, Rui Li

- 69, 2017 Undergraduate Research Day Audience's Favorite Poster Award, Rosendo Garcia
- 68, 2017 Organization for Chemical Engineering Graduate Students (OCheGS) Symposium Poster Award, Bryan Alamani
- 67, 2017 AIChE CRE Travel Award, Yufeng Shen
- 66, 2017 UH Cullen Fellowship Travel Grant, Bryan Alamani
- 65, 2017 Best Poster Award, *Southwest Catalysis Society Symposium*, Madhuresh Choudhary
- 64, 2017 Best Dissertation Award, Cullen College of Engineering, Katy N. Olafson
- 63, 2017 UH Summer Undergraduate Research Fellowship, Diego Guala
- 62, 2017 UH Summer Undergraduate Research Fellowship, Rosendo Garcia
- 61, 2017 UH MRS Chapter Student Symposium, 1st Place Poster Award, Yunwen Zhou
- 60, 2017 Kokes Travel Award, 24th North American Catalytic Society Meeting, Wei Qin
- 59, 2016 Research Excellence Awards at the Chinese-American Chemical Society Southwest Chapter Poster Competition: Yufeng Shen (1st Place), Wei Qin (2nd Place), and Rui Li (3rd Place)
- 58, 2016 UH Cullen Fellowship Travel Grant, Yufeng Shen
- 57, 2016 Best Poster Award, OChEGS Symposium, Jihae Chung
- 56, 2016 AIChE Women's Initiatives Committee (WIP) Travel Award, Katy Olafson
- 55, 2016 AIChE CRE Travel Award, Rui Li
- 54, 2016 Gordon Research Seminar on Biomineralization Invited Talk, Katy Olafson
- 53, 2016 UH Cullen Fellowship Travel Grant, Katy Olafson
- 52, 2016 AIChE Separations Division Graduate Student Research Award, Katy Olafson
- 51, 2016 UH Future Faculty Fellowship Program, Thuy Le and Aseem Chawla
- 50, 2016 PURS Fellowship, University of Houston, Zachery Baker
- 49, 2016 SURF Scholarship, University of Houston, Mangalaa Dinivahi
- 48, 2016 Scholars Program Scholarship, University of Houston, Zachery Baker
- 47, 2016 National Science Foundation Graduate Research Fellowship, Ricardo Sosa
- 46, 2016 PURS Fellowship, University of Houston, Matthew Patton
- 45, 2015 AIChE Best Presentation Award, Diagnostics, Treatment, and Theranostics (Topical Conference: Chemical Engineers in Medicine), Megan Ketchum
- 44, 2015 Organization for Chemical Engineering Graduate Students (OCheGS) Symposium Oral Presentation Award, Manjesh Kumar
- 43, 2015 Organization for Chemical Engineering Graduate Students (OCheGS) Symposium Poster Award, Katy Olafson
- 42, 2015 Poster Selected for Oral Presentation, Gordon Research Conference on Nanoporous Materials & Their Applications, Matthew Oleksiak
- 41, 2015 Poster Selected for Oral Presentation, Gordon Research Conference on Nanoporous Materials & Their Applications, Manjesh Kumar
- 40, 2015 First Prize Winner of the ACCGE-20 Photo Contest for Natural Untouched Photograph or Micrograph, American Conference on Crystal Growth & Epitaxy, Rui Li
- 39, 2015 Travel Award to the Gordon Research Conference on Crystal Growth & Assembly, Jihae Chung

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- 38, 2015 Poster Selected for Oral Presentation, Gordon Research Conference on Crystal Growth & Assembly, Katy Olafson
- 37, 2015 Travel Award to the Gordon Research Conference on Crystal Growth & Assembly, Katy Olafson
- 36, 2015 International School on Biological Crystallization (ISBC), Selected for Oral Talk (6 selected out of 44 posters), Bryan Alamani
- 35, 2015 International School on Biological Crystallization (ISBC) Travel Award, Bryan Alamani
- 34, 2015 Best Poster Award, *Southwest Catalysis Society Symposium*, Rui Li
- 33, 2015 UH Summer Undergraduate Research Fellowship, Ashwin Antony
- 32, 2015 Kokes Travel Award, 24th North American Catalytic Society Meeting, Manjesh Kumar
- 31, 2014 AIChE Best Presentation Award, *Particle Formation and Crystallization Processes from Liquids, Slurries, and Emulsions*, Jihae Chung (Invited to Submit "Best Paper" to the AIChE Journal)
- 30, 2014 AIChE CRE Poster Award, Matthew Oleksiak
- 29, 2014 AIChE CRE Travel Award, Matthew Oleksiak
- 28, 2014 Selection for the UH Annual Graduate Research and Scholarship Projects (GRaSP) Day, Katy Olafson
- 27, Research Excellence Award and Third Place Winner of the Chinese-American Chemical Society Southwest Chapter Poster Award Poster Competition, Rui Li
- 26, 2014 OCheGS Symposium Poster Award Winner, Rui Li
- 25, 2014 Louis Stokes Alliance for Minority Participation Scholarship, Ricardo Sosa
- 24, 2014 UH Provost's Undergraduate Research Scholarship, Maneesh Anand
- 23, 2014 Best Dissertation Award, Cullen College of Engineering, Alexandra Lupulescu
- 22, 2014 Southwest Catalysis Society Symposium Best Poster Award, Manjesh Kumar
- 21, 2014 Southwest Catalysis Society Symposium Best Poster Award, Matthew Oleksiak
- 20, 2014 SURF Fellowship, Rim Henini (Declined)
- 19, 2013 ERDT Research Fellowship from the University of the Philippines, Bryan Alamani
- 18, 2013 Keck Center Annual Research Conference Poster Contest, Second Place, Katy Olafson
- 17, 2013 AIChE CRE Travel Award, Manjesh Kumar
- 16, 2013 AIChE Sustainable Engineering Forum Student Paper Award, Honorable Mention, Alexandra Lupulescu
- 15, 2013 Keck Center Fellowship, Gulf Coast Consortia, Nanobiology Interdisciplinary Graduate Training Program, Katy Olafson
- 14, 2013 Southwest Catalysis Society Symposium Best Poster Award, Alexandra Lupulescu
- 13, 2013 Poster Award Honorable Mention, 3rd North American Symposium on Chemical Reaction Engineering, Matthew Oleksiak
- 12, 2013 Kokes Travel Award, 23rd North American Catalytic Society Meeting, Matthew Oleksiak
- 11, 2013 ACS Student Travel Award, Catalysis Science and Technology (CATL), Alexandra Lupulescu
- 10, 2012 AIChE CRE Poster Award, Alexandra Lupulescu
- 9, 2012 AIChE CRE Travel Award, Alexandra Lupulescu
- 8, 2012 AIChE CRE Travel Award, Arian Ghorbanpour
- 7, 2012 AIChE Environmental Division's Graduate Student Award, 2nd Place Winner, Alexandra Lupulescu

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- 6, 2012 Most Outstanding Senior Thesis (UH Honors College), Miguel Maldonado
- 5, 2012 Southwest Catalysis Society Symposium Best Poster Award, Alexandra Lupulescu
- 4, 2011 Organization for Chemical Engineering Graduate Students (OCheGS) Symposium Poster Award Winner, Arian Ghorbanpour
- 3, 2011 PURS Fellowship, University of Houston, Temitope Ajala
- 2, 2011 SURF Fellowship, University of Houston, Miguel Maldonado
- 1, 2010 PURS Fellowship, University of Houston, Miguel Maldonado