

**List of Publications for Bruce Mattson  
(in reverse chronological order)**

89. "Visualizing Dissolution, Ion Mobility, and Precipitation through a Low-Cost, Rapid-Reaction Activity Introducing Microscale Precipitation Chemistry" Bob Worley, Eric M. Villa, Jess M. Gunn, Bruce Mattson\* accepted for publication in *J. Chem. Educ.*, December 2018.
88. Bringing New Chemistry into the Classroom: Nanoparticles and catalysis: Part 3. Building a nanoparticle, Bruce Mattson\* and Samantha Jarman, ***Chem13 News***, **2018**, 437, 12 – 15.
87. Bringing New Chemistry into the Classroom: Nanoparticles and catalysis. Part 2. Estimating the amazing surface area of the incredibly tiny, Bruce Mattson\* and Samantha Jarman, ***Chem13 News***, **2018**, 436, 15 – 17.
86. Bringing New Chemistry into the Classroom: Nanoparticles and catalysis series. Part 1. Function and Importance of nanoparticles in catalysis, Bruce Mattson\* and Samantha Jarman, ***Chem13 News***, **2017**, 435, 12 – 15. This is a 3-part series on Bringing New Chemistry into the Classroom: Nanoparticles and Catalysis Series.
85. Heterogeneous catalysis: deuterium exchange reactions of hydrogen and methane, Anne Mirich, Trisha Hoette Miller, Elsbeth Klotz, Bruce Mattson\*, *J. Chem. Educ.*, **2015**, *92* (12), pp 2087–2093.
84. Structural characterization of dissolved organic matter: a review of current techniques, Elizabeth C. Minor, Michael Swenson, Bruce Mattson, and Alan Oyler *Environmental Science: Processes and impacts*, The Royal Society of Chemistry, 2014,16, 2064-2079.
83. Heterogeneous catalysis: The Horiuti-Polanyi mechanism and alkene hydrogenation. Bruce Mattson\*, Wendy Foster, Jaclyn Greimann, Trisha Hoette, Nhu Le, Anne Mirich, Shanna Wankum, Ann Cabri, Claire Reichenbacher, and Erika Schwanke, ***Journal of Chemical Education***, **2013**, **90** (5), 613–619.
82. The Spark(l)ing Vinaigrette," Jorge Ibanez, Jorge Vazquez-Olavarrieta, Max Moran-Orozco, Elizabeth Garcia-Pintor, Angela Köhler-Krützfeldt, Michael Anderson, Bruce Mattson; ***Journal of Chemical Education***, **2011**, **88**, 1404 – 1405.
81. The Equilibrium Constant for Bromothymol Blue: A general chemistry laboratory experiment using spectroscopy, Elsbeth Klotz, Robert Doyle, Erin Gross\* and Bruce Mattson\*\*, ***Journal of Chemical Education***, **2011**, **88**, 637 – 639.
80. "Microscale Gas Chemistry," Bruce Mattson and Michael Anderson, invited paper to the Association for Science Education (UK)'s premier journal ***School Science Review***, **2011**, **92**, 43 – 48.

79. The remarkable chemistry of potassium dioxide(1-) (potassium superoxide). Two Microscale Classroom Demonstrations.” Andrew Allen, Michael Anderson, and Bruce Mattson; *Journal of Chemical Education* **2009**, **86**, 1286 – 1289.
78. Hydrogen and palladium foil. Two classroom demonstrations. Klotz, E.; and Mattson, B. *Journal of Chemical Education* **2009**, **86**, 465 – 469.
77. Microscale Gas Chemistry, invited commemorative article, Mattson, B., *Chem13 News* **2008**, **361**, 15 - 18.
76. “Microscale Gas Chemistry, Part 29. The Mini-Ozone Generator and Bacteria in Natural Aquatic Samples,” Bruce Mattson, Stephanie Gallegos, Laleh Mehrafiee, Jiro Fujita, *Chem13 News* **2007**, **351**, 8 – 10.
75. “Incomplete Combustion of Hydrogen: Trapping the Hydroxyl Radical,” Mattson, B.; Hoette, T.; *Journal of Chemical Education* **2007**, **84**, 1668 – 1670.
74. “Demonstrating the Paramagnetism of Liquid Oxygen with a Neodymium Magnet,” Mattson, B.; *Journal of Chemical Education* **2007**, **84**, 1296 - 1298.
73. “Microscale Gas Chemistry, Part 28. Mini-Ozone generator: 800 nanomole/minute,” Bruce Mattson, Janel Michels, Stephanie Gallegos, Jorge G. Ibanez, Alejandro Alatorre-Ordaz, Rodrigo Mayen-Mondragon, M. T. Moran-Moran, *Chem13 News* **2007**, **344**, 6 – 11.
72. “Microscale Environmental Chemistry Part 5. Production of ClO<sub>2</sub>, an environmentally-friendly oxidizer and disinfectant;” Ibanez, Jorge G.; Navarro-Monsivais, Carlos; Terrazas-Moreno, Sebastian; Mena-Brito, Rodrigo; Pedraza-Segura, Lorena; Mattson, Bruce; Anderson, Michael P.; Fujita, Jiro; Hoette, Trisha, *Chem. Educator* **2006**, **11**, 174-177.
71. Invited book chapter, “Microscale Gas Chemistry,” Mattson, B., *Microscale Chemistry Experimentation for All Ages*, Peter Schwarz, Muhamad Hugerat, and Mordechai Livneh, editors; published by Arab Academic College for Education in Israel, Haifa, Israel, pages 267 – 285, 2006.
70. “Propanol to Propane. An advanced laboratory experiment using two gas-phase heterogeneous catalysts;” Mattson, B.; Hulce, M.; Cheng, W. Greimann, W.; Hoette, T.; and Menzel, P.; *Journal of Chemical Education*, 2006, **83**, 421 – 424.
69. *Microscale Gas Chemistry, 4<sup>th</sup> Edition*, (book), Mattson, B. M., Anderson, M. P.; and Mattson, S. E.; published by Educational Innovations, 2006.
68. “Microscale Gas Chemistry”; Mattson, B.; invited publication, *Educación Química*. **16**(4), October, 2005, 514 – 528.

67. "Laboratory Experiments on the Electrochemical Remediation of the Environment, Part 7. Microscale Production of Ozone"; Ibanez, J. G.; Alatorre-Ordaz, A.; Mayen-Mondragon, R.; Moran-Moran, M. T.; Bruce Mattson, Scot Eskestrand; ***Journal of Chemical Education*** 2005, **82**, 1546-1548.
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65. "Microscale Gas Chemistry, Part 26. Carbonated Beverages — Priestley's Soda-water", Mattson, B.; Saunders, E.; Sconzo, P.; ***Chem13 News***, **324**, 6-11, November, 2004.
64. "Microscale Gas Chemistry, Part 25. Mystery Gas", Mattson, B.; and Pottebaum, D.; ***Chem13 News***, **318**, February, 2004, 10 - 11.
63. "Microscale Gas Chemistry, Part 24. Percent Composition of Calcium Carbonate in Tums®. A chemistry laboratory experiment.", Mattson, B.; and Saunders, E., ***Chem13 News***, **313**, September, 2003.
62. "Demonstrating Heterogeneous Gas Phase Catalysis with the Gas Reaction Catalyst Tube," Mattson, B., Fujita, J., Catahan, R., Cheng, C., Greimann, J., Hoette, T., Khandhar, P., Mattson, A., Rajani, A., Sullivan, P., Perkins, R", ***Journal of Chemical Education***, 2003, **80**, 768 - 773.
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52. "Ion-Molecular Reactions of Free Phenylum Ions, Generated by Tritium B-decay, with Group V-VII Elements," Shchepina, N. E., Nefedov, V. D., Toropova, M. A., Avrorin, V. V., Lewis, S. B., Mattson, B. M., **Tetrahedron Letters**, 2000, **41** (28) 5303 – 5306
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