

Experience Profile

Jonathan Filley

Thesis

Organic gas phase ion-molecule reactions

Education

Ph.D. Organic Chemistry University of Colorado-Boulder, 1985

B.S. Chemistry with honors, Bowdoin College, Brunswick, ME, 1980

Expertise

Chemical consulting over a wide range of disciplines, including pharma and combustion. Design and synthesis of novel compounds, analytical techniques: MS, GC, LC, IR, NMR. Instrument building, vacuum systems, OLEDs.

Industries/Experience

GammaLabs, Boulder, CO

We pursue a variety of **nanotechnology related research projects**. Pioneering the use of cheap and simple starting materials for the synthesis of complex and useful protein-sized molecules. Our ultimate goal is a suite of catalysts which will perform a multitude of reactions for an array of applications.

Dolight, Inc. (COLED)

Colorado School of Mines, Golden, CO

- **Fullerene chemistry**
- **Polymer modeling**
- **Catalyst development**
- **Combustion and fuel research**

National Renewable Energy Laboratory, Golden, CO

- **Biomass pyrolysis**
- **Catalyst development**
- **Catalytic upgrading of biomass to fuels**
- **Synthetic projects on photochromism and high temperature electrolytes**

Publications (selected out of 22 total)

Filley, J. "New lubricants from vegetable oil: Cyclic acetals of methyl 9,10 dihydroxystearate." *Bioresource Technol.* **2005**, 96, 551.

Nimlos, M.R.; Filley, J.; McKinnon, J.T. "Hydrogen atom mediated Stone-Wales rearrangement of pyracyclene: A model for annealing in fullerene formation." *J. Phys. Chem. A* **2005**, 109, 9896.

Herring, A. M.; McKinnon, J. T.; McCloskey, B. D.; Filley, J.; Gneshin, K. W.; Pavelka, R. A.; Kleebe, H.-J.; Aldrich, D. J. "A Novel Method for the Templated Synthesis of

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Homogeneous Samples of Hollow Carbon Nanospheres from Cellulose Chars." *J. Am. Chem. Soc.*; **2003**; 125(33); 9916-9917.

Filley, J. "Stable water–oil emulsions from the new insoluble surfactant sodium 5-(1-dodecylaminocarbonyl) picolinate." *J. Interface Colloid Sci.* **2003**; 266(2); 438-441.