

# BRIAN NELTNER

(617) 938-7735

Boston, MA

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## EDUCATION

- **Massachusetts Institute of Technology**, Cambridge MA
- Doctor of Philosophy in **Materials Science and Engineering**, May 2010 (MIT)
- Dual baccalaureate degree in **Materials Science** and **Physics**, May 2005 (MIT)

## WORK EXPERIENCE

### [NELTNER LABS](#), PRESIDENT, OCTOBER 2017 – PRESENT

- Consulting and contract support for startup prototype and proof of concept development.

### [VISOLIS](#), DIRECTOR OF CATALYSIS, JUNE 2015 – SEPTEMBER 2017

- Managed a team in a startup environment to accomplish catalyst development and process goals.
- Designed and constructed new catalyst test reactors.
- Developed on-line analytical methods for chemical reactor and bioreactors.
- Improved yield in a key process from 20% to 97%, a second process to 97%, and a third process to 65%.
- Managed off-site replication of catalyst performance results at PNNL.
- Collaborated to put together winning Phase II and Phase I grant awards.

### [NAVOLTA](#), FOUNDER, JANUARY 2011 – MAY 2015

- Principle Investigator on NSF STTR grant to develop thin film coating technology with a small team.
- Successfully used coatings to prevent copper oxidation at 500C.
- Constructed supercritical CO<sub>2</sub> reactor to operate at 5000PSI and 500C.
- Developed miniature reactor technologies based on inexpensive capillary tubing.
- One issued patent, one patent application.

### [AMBRI](#), PRINCIPAL ENGINEER, OCTOBER 2011 – APRIL 2013

- Developed instrumentation to support development of liquid metal batteries.
- Developed new seal technology resulting in one patent applications.

### INDEPENDENT CONSULTANT, JUNE 2005 – JUNE 2015

- Electronics and firmware development, specializing in instrumentation and controls.
- High Speed AFM Controller, Chemical Reactor Control System, LED Lighting, and others.

### [WEIMER LAB](#), POSTDOCTORAL RESEARCH, UNIVERSITY OF COLORADO, MAY 2010 – AUGUST 2011

- Developed coating for phase stabilization of titania.
- Collaborated with NREL in investigating pyrolysis oil upgrading catalysts.

### [BELCHER LAB](#), GRADUATE RESEARCHER, MIT, JUNE 2005 – MAY 2010

- Produced bio-templated catalysts allowing for reforming ethanol into hydrogen gas.
- Built chemical reactor test bed and supporting systems.
- Technology was awarded a patent and is being commercialized by [Siluria](#).

### STELLACCI & JACOBSON LABS, UNDERGRADUATE RESEARCHER, MIT, 2001 – 2005

- Developed technique to use DNA to self-assembled structures with gold nanoparticles.
- Developed equipment supporting fabrication of MEMS with microcontact lithography.

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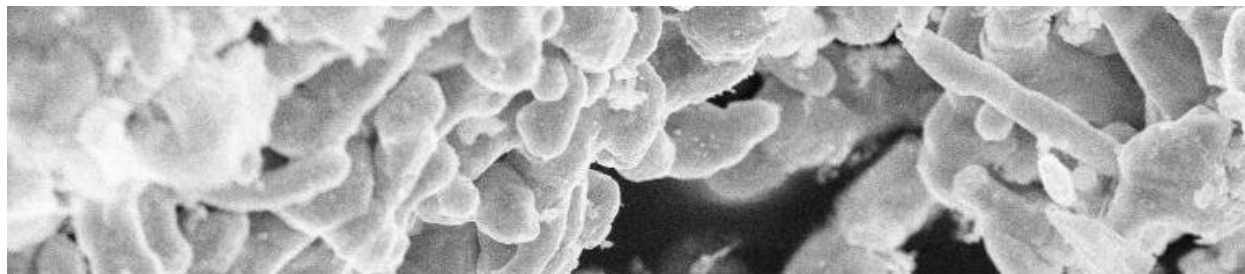
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## PUBLICATION LIST

- Neltner BT, et al. [“Production of Hydrogen Using Nanocrystalline Protein-Templated Catalysts on M13 Phage”](#) ACS Nano 4(6), pp. 3227-3235 (1<sup>st</sup> Author)
- Zhou, Y, et al. [“Growth of Pt Particles on the Anatase TiO<sub>2</sub> \(101\) Surface”](#) Journal of Physical Chemistry C 116(22), pp. 12114-12123 (3<sup>rd</sup> Author)
- Gould, TD, et al. [“Synthesis of supported Ni catalysts by atomic layer deposition”](#) Journal of Catalysis 303, pp. 9-15 (3<sup>rd</sup> Author)
- DeVries GA, et al. [“Divalent metal nanoparticles”](#) Science 315(5810), pp. 358-361 (6<sup>th</sup> Author)
- Wilhelm EJ, et al. [“Nanoparticle-based microelectromechanical systems fabricated on plastic”](#) Applied Physics Letters 85(26), pp. 6424-6426 (2<sup>nd</sup> Author)
- [“Hybrid bio-templated catalysts”](#), Ph.D. Dissertation
- [“Biotemplated Inorganic Materials”](#), US Patent Number US9029286 B2
- [“System and Method for a Microreactor”](#), US Patent Number US8875981 B2
- [“Supercritical Deposition of Protective Films on Electrically Conductive Particles”](#), US20140329005 A1
- [“Processes for Conversion of Biologically Derived Mevalonic Acid”](#), US20160145227 A1
- [“Seals for High Temperature, Reactive Metal Devices”](#), WO2015058010 A1

## ACTIVITIES AND RECOGNITIONS

- Instructor and Captain of the [MIT Shotokan Karate Club](#).
- Founder of the [SaikoLED Project](#) to produce open-source LED Lighting.
- Board Member of the Tau Epsilon Phi Grand Council from 2011-2013.
- Vice President of the TEP Foundation, an educational non-profit.
- President of the [Club Sports’ Council](#) for 3 years.
- President and Recruitment Chair for Tau Epsilon Phi Fraternity
- Varsity Rower, MIT Heavyweight Team
- Eagle Scout and Vigil Honor in the Boy Scouts of America