

William L. Bradbury

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Professional Experience

Research Specialist III

09/05 – 05/11

San Diego State University - Powder Technology Lab

- **Lab Management** – Significant interpersonal interaction with employees, sponsors, vendors and other lab visitors of diverse backgrounds and levels of training/experience
- **Technical Maintenance of Lab Materials and Scientific Equipment** – Successfully restored functionality of multiple electro-mechanical devices, monitored and executed maintenance schedules for sophisticated lab equipment
- **Lab Safety Coordination** – Maintenance of MSDS database, administration of safety training exams, monitoring of hazardous waste handling compliance procedures

Education

Ph.D. in Mechanical and Aerospace Engineering, UCSD/SDSU, GPA 3.78/4.0, May 2015

Proposed Thesis: Fundamental Aspects of Spark Plasma Sintering Processing Technology

M.S. in Mechanical Engineering, SDSU, GPA 3.71/4.0, August 2010

Thesis: Agricultural-Waste Biomass for High-Surface Area Structures via Nano-Material Synthesis and Spark Plasma Sintering, Bradbury W.L., *San Diego State University*, (2010)

B.S. (A.A.S.) in Mechanical Engineering, SDSU, GPA 3.04/4.0, May 2008

Senior Project: Design and fabrication of an AC pulse based spark plasma sintering device with verification of functionality in comparison to DC pulse based spark plasma sintering of nickel

Technical Experience

- Spark Plasma Sintering device independent operator with 200+ hours logged
- Scanning Electron Microscope independent operator with 250+ hours logged on 3 distinct tools
- Independent operator of TEM, XRD, BET, dilatometry and other analytical equipment
- 5 years experience with sintering ovens, vacuum systems, material synthesis and powder processing
- SolidWorks drafting experience for fabrication of powder metallurgy die/mold components
- Proficient with Word, Excel, PowerPoint, Adobe Photoshop, Dreamweaver and FTP programs
- Exposure to Pro-Engineer, Labview, Matlab, C++ and Endnotes

Published Articles in Refereed Journals

- **Microstructural Investigation of as Cast and PREP Atomised Ti-6Al-4V Alloy**, Yamanoglu R., German R.M., Karagoz S., Bradbury W.L., et. al, *Powder Metallurgy International* (In Press, 2011)
- **Synthesis of Carbide Nano-structures on Monolithic Biomass-Activated Carbon Templates**, Bradbury W.L. and Olevsky E.A., *Int. J. Appl. Ceram. Technol.* 8, [4] 947-952 (2011)
- **Fundamentals of Spark-Plasma Sintering: Applications to Net-Shaping of High Strength Temperature Resistant Components**, Olevsky E.A., Khaleghi E., Garcia C. and Bradbury W.L., *Materials Science Forum* 654-656, 412-415 (2010)
- **Production of SiC-C Composites by Free-Pressureless Spark Plasma Sintering (FPSPS)**, Bradbury W.L. and Olevsky E.A., *Scripta Materialia* 63, [1] 77-80 (2010)

Selected Contributions to Conference Presentations

- **2011 TMS Annual Meeting and Exhibition:** *Challenges in the Scalability of Field Assisted Sintering*, Chris Haines, Darold Martin, Deepak Kapoor, William Bradbury and Eugene Olevsky
- **2011 TMS Annual Meeting and Exhibition:** *Fundamentals of Spark-Plasma Sintering: Net-Shaping and Size Effects*, Eugene Olevsky, Evan Khaleghi, Cristina Garcia, William Bradbury, Randall German, Chris Haines, Darold Martin and Deepak Kapoor
- **2011 TMS Annual Meeting and Exhibition:** *Progress and Potential of Free Pressure-less Spark Plasma Sintering (FPSPS) Processing*, William Bradbury, Ridvan Yamanoglu, Wei Li, Randall M. German and Eugene Olevsky
- **2011 TMS Annual Meeting and Exhibition:** *Determination of the Spark Plasma Sintering Fundamental Densification Mechanisms by Novel Cyclic Loading Approach*, Wei Li, William Bradbury, Joanna McKittrick, Randall German and Eugene Olevsky
- **2010 The 7th Pacific Rim International Conference on Advanced Materials and Processing:** *Fundamentals of spark-plasma sintering: Applications to net-shaping of high strength temperature resistant components*, Eugene Olevsky, Evan Khaleghi, Cristina Garcia and William Bradbury
- **MS&T 2010:** *High Surface Area Composites by Free-Pressureless Spark Plasma Sintering (FPSPS)*, William Bradbury and Eugene Olevsky
- **2010 34th International Conference and Exposition on Advanced Ceramics and Composites:** *Impact of specimen shape on temperature and density gradients in spark-plasma sintering*, Eugene Olevsky, Cristina Garcia, Evan Khaleghi, William Bradbury, Wei Li and Randall German
- **PM2010 Powder Metallurgy World Congress:** *Net-Shaping by Spark-Plasma Sintering*, Eugene Olevsky, Evan Khaleghi, Cristina Garcia and William Bradbury
- **MS&T 2009:** *Coupled Electro-Thermo-Mechanical Analysis of Spark-Plasma Sintering* Eugene Olevsky, Cristina Garcia, Evan Khaleghi, William Bradbury, Wei Li and Randall German

Published Articles in Conference Proceedings

- **Agricultural-Waste Nano-Particle Synthesis Templates for Hydrogen Storage**, Bradbury W.L. and Olevsky E.A., *Ceramic Transactions*, 223, (2010)

Projects

- **Contributing Researcher**, SPS Processing of WC-Co Tough-Coated Hard Powder (TCHP) Complex Alloy Materials, Li W., Bradbury W.L., Olevsky E.A. and German R.M.
- **Contributing Researcher**, Thermal, Mechanical, Electrical and Magnetic Characterization of SPS Reactive Sintering Processed Nano-Barium Ferrite, Bradbury W.L., Olevsky E.A. and Hong Y.K.

Honors and Affiliations

- **Member**, Order of the Engineer, 05/08 – Present
- **Member**, Material Advantage Student Program 10/09 – Present
- **Associate Member**, American Ceramic Society 10/09 – Present
- **Assistant Mentor**, SDSU Upward Bound Classic 06/09 – 07/09
- **Reviewer**, *Composites Science and Technology* 11/10 – Present
- **Reviewer**, *Journal of the American Ceramic Society* 1/11 – Present
- **Reviewer**, *Journal of Ceramic Transactions* 01/09 – Present
- **Reviewer**, *International Journal of Applied Ceramic Technology* 12/10 – Present
- **Reviewer**, *Journal of Materials Science* 12/10 – Present
- **Reviewer**, *Material Science and Engineering B* 2/11 – Present
- **Officer**, IMAPS SDSU Chapter 03/07 – 05/10
- **Member**, Phi Eta Sigma Honor Society 2006 – 2008
- **Dean's List and Presidential Honor Roll** 2004