Devin T. McMillen

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Education

Missouri University of Science & Technology
M.S. Manufacturing Engineering Projecting Spring 2017
B.S. Ceramic Engineering Graduated Spring 2015

Experience

Missouri University of Science and Technology Rolla, Missouri
Graduate Research Assistant June 2015 to May 2017

- Improved ceramic processing for additive manufacturing technique
- Developed high solids loading ceramic extrudates (e.g. ZrO_2, Al_2O_3, ZrB_2)
- Developed reaction sintering chemistry for AM in-situ fabrication of ZrB_2
- Evaluated extrudate with dynamic viscometry

Daltile, Corp. Tile Manufacturing Plant Muskogee, Oklahoma
Body Composition and Raw Materials Intern May to August 2014

- Established specifications for free silica content of clay material
- Manipulated multiple formulae for optimization of porcelain body
- Performed physical analysis of argillaceous material substitutes

Biomet, Inc Warsaw, Indiana
Co-op in Global Fixation and Anti-Infection Technologies January to August 2013

- Materials selection and analysis
- *In situ* and *in vitro* testing design and simulation
- Analyzed ultimate strength of polymers and titanium alloys
- Anodized titanium for nano-scale surface manipulation
- Literature review yielding invention disclosure

Materials Science and Engineering Department Rolla, Missouri
Undergraduate Research Consulting Assistant January to Dec. 2012

- Performed quality testing of pre-form powders
- Developed composition of vitreous ink for screen-printing

Materials Science and Engineering Department Rolla, Missouri
Undergraduate Research Assistant February to July 2011

- Constructed novel bioactive borate scaffold geometries
- Studied saturation limits of borate systems *in vivo* and *in vitro*
- Performed multi-week angiogenesis trials

Publications

D. McMillen, G.E. Hilmas, J.L. Watts, M.C. Leu, *Designed Extrudate for In-Situ Fabrication of ZrB_2*, in: D. Bourell, J. Beaman, R. Crawford, S. Fish, H. Marcus, C. Seepersad (Eds.), Solid Free. Fabr. Symp., Austin, TX, USA, 2016 (pending).