

MSE Monthly Update

For the period of March 16 2021 to April 15 2021

Notable Achievements/Announcements

- Clemson MSE Jumps up 8 points in the new US News and World Report rankings @ #50 (up from 58 out of 114 schools) for Materials graduate programs. <https://www.usnews.com/best-graduate-schools/top-engineering-schools/material-engineering-rankings>.
- Steve Foulger received a Fulbright Award for research in the Czech Republic <https://www.facebook.com/ClemsonCECAS/photos/pb.160230547351632.-2207520000../5446556588718975/?type=3&theater>.
- John Ballato featured in The Verge on the role that glass plays in enabling global communication <https://youtu.be/36O-nkNcO58>.
- Igor Luzinov featured on Clemson News for Earth Day for recycling efforts <https://news.clemson.edu/old-friends-find-new-way-of-breaking-down-plastic-for-potential-recycling/>.
- Siyang Wang (Urban Group) selected to present at 2021 Excellence in Polymer Research Symposium & Eric Miller, (Kuksenok Group), received Third Place Poster for Undergraduate Research at 2021 ACS Spring Meeting.

New Proposals and Grants

Proposals Awarded

- **Chris Cole** was awarded a grant from Cornerstone Research Group, Inc. entitled "Signature Management Textiles".

Proposals Submitted

- **Steve Foulger** submitted a proposal to NSF entitled "Hybrid Electrochemical-Structural Polymer Memristor for Synaptic Mimicry".
- Melissa Smith (ECE) along with **Igor Luzinov**, Jerome McClendon (Campbell Grad Engr. Program), Rachel Getman (ChemE), Pamela Murray-Tuite (Civil), Andrew Edmunds (Dean of Engr. & Sci.), Harlan Russell (ECE), Matthew Voigt (Engr. & Sci. Ed.), Mark Schlautman (EEE), Thomas Sharkey (IE), Oliver Myers (ME), and Jacob Sorber (Sch. Of Computing) submitted a proposal to NSF entitled "TIGERS 2 DRS: Creating Pathways to the PhD for Low-Income STEM Students".

New MSE Journal Publications

- Chen, M.; Cullen, D. A.; Karakalos, S.; Lu, X.; Cui, J.; Kropf, A. J.; Mistry, H.; **He, K.**; Myers, D. J.; Wu, G. Single Atomic Iron Site Catalysts via Benign Aqueous Synthesis for Durability Improvement in Proton Exchange Membrane Fuel Cells. *J. Electrochem. Soc.* 2021, *168*, 044501.
- Zhao, Z.; Gao, J.; Meng, Y.; **Brinkman, K. S.**; **Tong, J.** Moderate temperature sintering of BaZr_{0.8}Y_{0.2}O_{3-δ} protonic ceramics by A novel cold sintering pretreatment. *Ceram. Int.* 2021, *47*, 11313-11319.
- Li, Y.; Chatterjee, S.; **Martinez, E.**; Ghoniem, N.; Po, G. On the cross-slip of screw dislocations in zirconium. *Acta Materialia* 2021, *208*, 116764.
- Xiong, Y.; **Kuksenok, O.** Mechanical Adaptability of Patterns in Constrained Hydrogel Membranes. *Langmuir : the ACS journal of surfaces and colloids* 2021, *37*, 4900-4912.
- Pinto, I. C.; Galleani, G.; **Jacobsohn, L. G.**; Ledemi, Y.; Messaddeq, Y.; Stucchi de Camargo, Andrea Simone Fluorophosphate glasses doped with Eu³⁺ and Dy³⁺ for X-ray radiography. *J. Alloys Compounds* 2021, *863*, 158382.
- Silva, D. C.; Lima, A. S.; Silva, J. H. L.; Rezende, M. V. S.; Sampaio, D.,V.; **Ballato, J.**; Silva, R. S. Laser sintering and influence of the Dy concentration on BaAl₂O₄:Eu²⁺, Dy³⁺ persistent luminescence ceramics. *Journal of the European Ceramic Society* 2021, *41*, 3629-3634.
- Bartley, A. F.; Fischer, M.; Bagley, M. E.; Barnes, J. A.; Burdette, M. K.; Cannon, K. E.; Bolding, M. S.; **Foulger, S.**; McMahon, L. L.; Weick, J. P.; Dobrunz, L. E. Feasibility of cerium-doped LSO particles as a scintillator for X-ray induced optogenetics. *Journal of neural engineering* 2021.

