



A. JAMES CLARK SCHOOL OF ENGINEERING

Department of Materials Science & Engineering



Dear Friends,

The Materials Science and Engineering (MSE) Department at University of Maryland – College Park (UMD) wish you and your family Happy Holidays and a Happy New Year ahead. We would like to share some of the major news of our Department with you during the holiday break.

Maryland MSE Department had an excellent year even during the pandemic. We reached \$0.9M in research expenditures per full-time faculty. Prof. Eric Wachsman was named a Distinguished University Professor and the President of the Electrochemical Society (ECS). Prof. Liangbing Hu won his third R&D 100 Award and was named a Distinguished Scholar-Teacher as well as an MRS Fellow. Our major research areas such as batteries and fuel cells, wood and cellulose, and ultrahigh temperature synthesis continue to make breakthroughs. We hope you enjoy reading our news as we enjoyed yours.

Enjoy a relaxing time with your family and friends during the holidays!

JC Zhao

Chair, MSE Department at UMD

Maryland & MSE Battery and Fuel Cell Research Among the Best in the World

- [UMD top ranked U.S. university for solid-state battery research publications](#)
- [UMD researchers convert methane without greenhouse gas emissions](#)
- [Eric Wachsman elected president of Electrochemical Society](#)
- [CREB kicks off 2021 with meeting to discuss future of battery research](#)
- [Batteries that function in the iciest conditions](#)



Wood and Bamboo Inventions Shine, Make Cover of Science



- [Moldable wood from water 'shock' process graced the cover of Science](#)
- [Could nanocellulose save us?](#)
- [Wood that can cut like steel, be molded like plastic or build batteries?](#)
- [Plastic alternative made 100% of wood](#)
- [Bamboo fibers offer strong, 'green' manufacturing alternative](#)
- [Expanded wood fiber for high-performance solid-state paper batteries](#)

Ultrafast High-Temperature Synthesis Method Led to New Technologies

- [Maryland scientists synthesize metallic glass nanoparticles via high temperature thermal shock](#)
- [Hollow, multi-metallic nanoparticles offer novel strategy for synthesis of highly efficient catalysis](#)
- [Scientists design and synthesize denary oxide nanoparticles as highly stable catalysts](#)



Faculty Members Won Numerous Awards

- [Eric Wachsman named Distinguished University Professor](#)
- [Eric Wachsman's fuel cell membrane technology nominated for Invention of the Year award](#)
- [Liangbing Hu elected to the class of 2021 MRS Fellows](#)
- [Liangbing Hu won third R&D 100 Award for ultrafast high-temperature synthesis](#)
- [Liangbing Hu named 2021/2022 Distinguished Scholar-Teacher](#)
- [Liangbing Hu's HighT-Tech wins 2021 Spinoff Prize](#)
- [Liangbing Hu is finalist for 2021 Blavatnik National Awards for Young Scientists](#)
- [JC Zhao won prestigious William Hume-Rothery award](#)
- [10 Maryland MSE Faculty Members ranked in top 2% of world scientists](#)
- [Nine Maryland Engineers recognized as being "One in 1,000"](#)
- [Yifei Mo-led team won \\$1.8M NSF DMREF project](#)

Two New Assistant Professors Won Major Awards in First Year at Maryland

- [You Zhou receives NSF CAREER award and Publishes in Nature \(read more\)](#)
- [Carlos Rios Ocampo wins 3rd prize of Rising Stars of Light award](#)

Students Won Multiple Awards

- [MSE Ph.D. Student Daniela Fontecha wins NSF Fellowship award](#)
- [Eric Marksz wins Charles A. Caramello Distinguished Thesis award](#)
- [2021 Hulka and Wells Energy Fellowships awarded](#)
- [MSE Undergraduate Student Haotong Liang publishes first author paper](#)
- [Seven students win 2021 Dean's Research awards](#)
- [MSE creates new undergraduate award](#)

