



## Department of Materials Science and Engineering

UNIVERSITY OF WISCONSIN-MADISON

news for alumni • fall 2020

### From our chair

Hello friends and alumni,

I hope this message finds you safe and well.

I am pleased and honored to introduce myself as the new chair of the Department of Materials Science and Engineering. I have been a faculty member at UW-Madison since 2004 and also served as an associate department chair in MS&E from 2012 to 2015. In my research, I develop and apply theory and multiscale simulations, combined with advanced materials characterization, to discover fundamental materials behavior and to develop new advanced materials for future technologies. I am very grateful to Professor Susan Babcock for the leadership she provided to the department for almost a decade. I look forward to the opportunity to continue the tradition of excellence in both education and research scholarship at MS&E. I invite you to [visit our website to read my full chair's message](#).



On, Wisconsin!

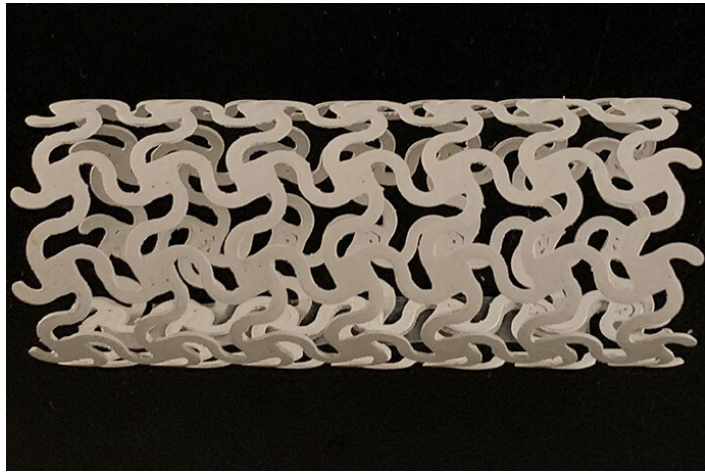
Izabela Szlufarska  
*Professor and Department Chair*

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### Smart artery

Professor Xudong Wang's new flexible, ferroelectric artificial artery will allow doctors and patients to monitor blood vessel health remotely.

[Read more](#)

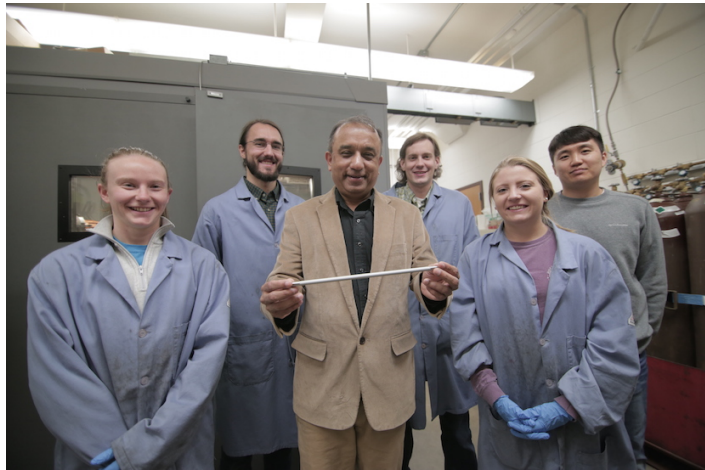


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## New coating technology patented

Professor Kumar Sridharan and his students developed a new cold-spray deposition coating technique that protects reactor cores in off-normal high temperature scenarios.

[Read more](#)



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## Investment with impact

A historic \$32 million commitment from The Grainger Foundation of Lake Forest, Illinois, will propel the College of Engineering on its growth trajectory. The pledge funds a major undergraduate scholarship program and seven professorships, and establishes the Grainger Dean of the College of Engineering.

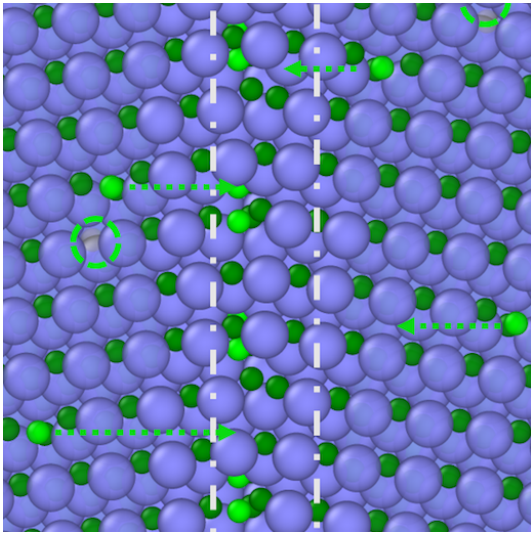
[Read more](#)



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## More headlines

- Professor Chang-Beom Eom's research into [novel anti-perovskite heterostructures](#) could lead to new field of electronic devices.
- Graduate student Benjamin Afflerbach [developed a new teaching module](#) to keep the summer Research Experience for Undergraduates running.
- ASM International, the largest materials research society, recently awarded Professor John Perepezko the [Albert Easton White Distinguished Teacher Award](#), citing his devotion to lifelong learning and the contagious passion passed forward to his students.
- During the pandemic, [video games developed by the Materials Research Science and Engineering Center](#) are giving at-home students extra engineering education.
- Assistant Professor Jason Kawasaki is part of the new [Quantum Leap Challenge Institute for Hybrid Quantum Architectures and Networks](#), a multi-university collaboration to advance quantum computing.



Professor Izabela Slufarska recently found [radiation-induced segregation](#) in the grain boundaries of ceramics, which could lead to new specialized, tunable materials.



Assistant Professor Daniel Rhodes [develops novel layered materials](#) and fabricates them into 2D devices, which may enable electrical control of superconductivity and magnetism.



