



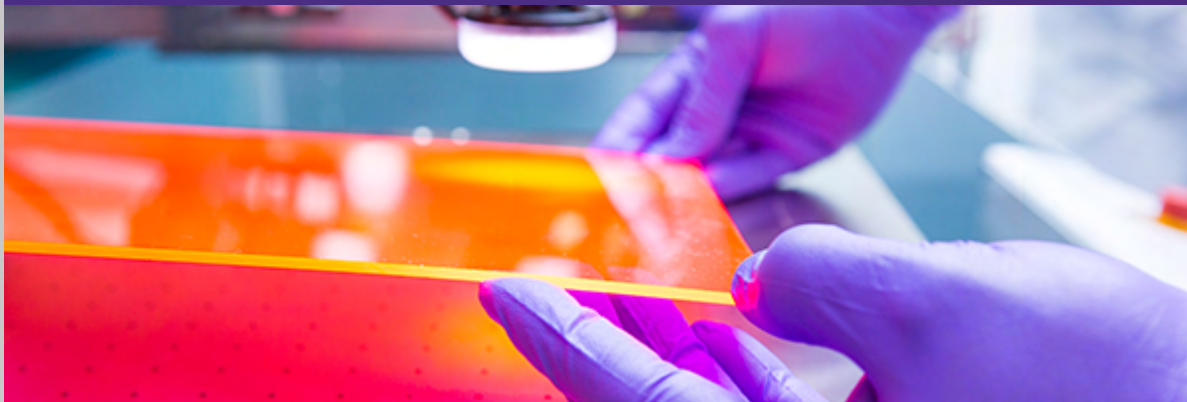
UNIVERSITY of WASHINGTON



MOLECULAR ENGINEERING & SCIENCES INSTITUTE

WINTER 2020

INSTITUTE NEWS



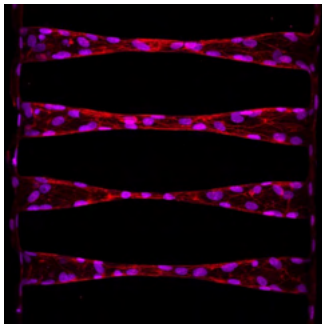
Collaborating for Cleantech

In collaboration with chemistry professor [Daniel Gamelin](#), and materials science & engineering professors [Christine Luscombe](#) and [Devin Mackenzie](#), molecular engineering Ph.D. student Ted Cohen is developing 3D-printable resins containing evenly dispersed perovskite nanocrystals for luminescent solar concentrators and other real-world applications.

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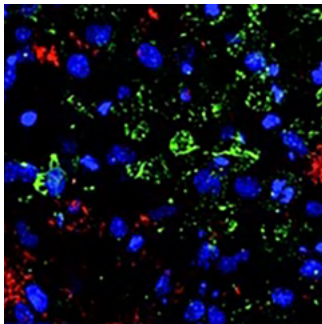
RESEARCH HIGHLIGHTS



Engineered capillaries model traffic in tiny blood vessels

Bioengineering professor [Cole DeForest](#) collaborated with researchers at the [UW Institute for Stem Cell & Regenerative Medicine](#) and [Seattle Children's](#) to engineer tiny blood vessels that shed light on how severe malaria infections cause red blood cells to get stuck in the bloodstream's narrowest passageways.

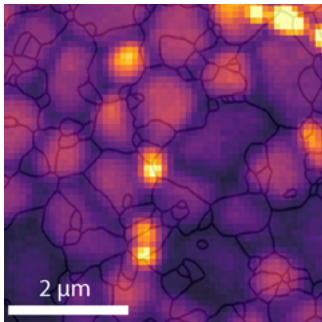
[Science Advances](#) | [UW Medicine Newsroom](#)



Using quantum dots for brain research

Mengying Zhang, a molecular engineering Ph.D. student in chemical engineering professor [Elizabeth Nance's](#) lab, characterized how quantum dots behave in developing brains with the hope of developing them as therapeutic and diagnostic tools for brain disorders.

[Nanoscale Advances](#) | [The Conversation](#)



New technique lets researchers map strain in next-gen solar cells

A team led by [David Ginger](#), chemistry professor and [Clean Energy Institute](#) chief scientist, developed a new way to illuminate strain in perovskite solar cells without harming them.

[Joule](#) | [UW News](#)

CONGRATULATIONS



MoIE student recognized for



MoES faculty named president of IUPAC



Fall 2019 graduates of the MoIE Ph.D.

excellence in graduate polymer research

Daniel Lee, a molecular engineering Ph.D. student in bioengineering professor [Suzie Pun's lab](#), was selected to present at the American Chemical Society's Excellence in Graduate Polymer Research Symposium in March.

Polymer Division

As president of the International Union of Pure and Applied Chemistry (IUPAC) Polymer Division, MoES education director [Christine Luscombe](#) will help facilitate scientific exchanges to promote the science and technology of macromolecules and polymers at the international level.

[Read her Macromolecules Editorial](#)

program

MoE students **Justin Davis** ([Novosselov lab](#)), **Dion Hubble** ([Jen lab](#)) and **Grant Williamson** ([Holmberg lab](#)) worked on designing better batteries and combatting air pollution. [Learn more about their research and what they are working on](#) since completing their Ph.D.s last fall!

STAFF SPOTLIGHT



MICROSCOPY: WHERE SCIENCE MEETS ART

Molecular Analysis Facility staff scientist **Scott Braswell** loves that microscopy draws on many areas of knowledge; knowledge of what you're observing, technical skills in capturing a good image, and your own aesthetic.

READ OUR Q&A



UPCOMING SEMINARS

Tuesdays 1:00 - 2:00 PM in Nanoengineering and Sciences (NAN 181)

February 25 | Wearable cyber-physical systems for adaptive correction of blurred vision
Carlos Mastrangelo, University of Utah

March 3 | Boosting intracellular delivery of mRNA therapeutics
Gaurav Sahay, Oregon Health & Science University



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