UNIVERSITY of WASHINGTON

Molecular Engineering & Sciences Institute

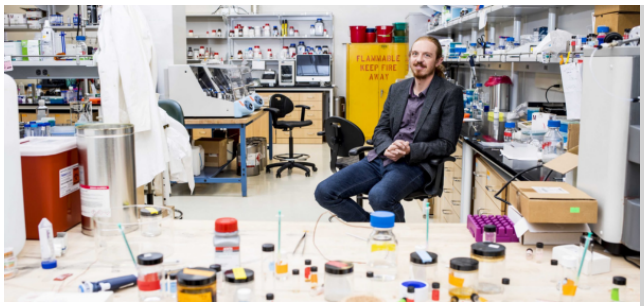
Winter 2025

Welcome, new 2024 MolES cohort!

MolES welcomed 13 new Molecular engineering doctoral students to the program this past fall. Their research spans diverse fields such as advanced drug delivery systems and sustainable material innovation and has the potential to revolutionize industries and tackle some of the most urgent global challenges.

Cole DeForest named new Director of Education

The Weyerhaeuser Endowed Professor and associate chair for graduate studies in chemical engineering, has been appointed Director of Education of MolES.



MolES professor David Baker wins Nobel Prize

Computational biologist David Baker has been awarded the 2024 Nobel Prize in Chemistry for computational protein design.

Corie L. Cobb is Fellow of the National Academy of Inventors

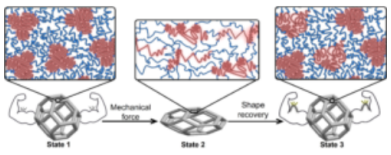
Corie L. Cobb, ME and MolES professor, has been named a 2024 Fellow of the National Academy of Inventors (NAI).

RESEARCH HIGHLIGHTS

MolES announces pilot awards

AI helps design vaccines

MolES professor and



Revolutionizing sustainable materials

MolES launched and awarded four pilot awards to support interdisciplinary collaboration with seed funding.

biochemist Neil King will lead one of the seven new centers in a network to prepare against a variety of dangerous pathogens.

Researchers have created a protein-based metamaterial that strengthens over time based on the stresses they experience.

PUBLICATIONS

Cavity–Waveguide Coupling Modulation via an Optical Analogue of Superradiance in Microring Arrays
ACS Publications

DNA Aptamer-Polymer Conjugates for Selective Targeting of Integrin α4β1+ T-Lineage Cancers
ACS Publications

Deterministic printing and heterointegration of single colloidal quantum dot photon sources
Arxiv.org

Metagenomic estimation of absolute bacterial biomass in the mammalian gut through host-derived read normalization
Biorxiv.org

Biomimetic mineralization of positively charged silica nanoparticles templated by thermoresponsive protein micelles: applications to electrostatic assembly of hierarchical and composite superstructures
Royal Society of Chemistry

Leveraging ordered voids in microporous perovskites for intercalation and post-synthetic modification
Royal Society of Chemistry

Modifying bacterial cellulose dispersions with deep eutectic solvent and pectin to tune the properties of open-celled foam
Royal Society of Chemistry

Low volume resuscitant for prehospital treatment of severe hemorrhagic shock

Wiley Online Library

MolES SEMINAR SERIES

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

2/11 - Douglas Reed, Professor of Chemistry, *University of Washington*

2/25 - Euisik Yoon, Professor of Electrical Engineering and Computer Science, *University of Michigan*

3/4 - Yiyang Li, Professor of Materials Science & Engineering, *University of Michigan*

3/11 - Andy Tay, Professor of Biomedical Engineering, *National University of Singapore*

4/8 - Markus Buehler, Professor of Civil and Environmental Engineering, *MIT*

4/15 - Abdon Pena-Francesch, Professor of Materials Science & Engineering, *University of Michigan*

4/22 - Lincai Gu, Professor of Biochemistry, *University of Washington*

5/6 - Theresa Reineke, Professor of Chemistry, *University of Minnesota*

5/13 - Matt Paszek, Professor of Chemical and Biomolecular Engineering, *Cornell University*

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