October 30, 2023

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Announcements

SGCOE Faculty Research Colloquium

Date: Tuesday, October 31, 2023
Time: 12:00-1:00 pm
Location: Brown-Kopel | 3rd Floor Grand Hall

Dean Mario Eden will be the speaker for tomorrow's SGCOE Faculty Research Colloquium. Lunch will be provided for attendees.

CITI Login Now Connected to Single Sign-On

Auburn University research personnel (faculty, postdocs, students, and staff) now have the ability to access CITI training through Single Sign-On (SSO) using their Auburn username, password, and DUO. Please use the Auburn University CITI Single Sign-On guidance as appropriate to access CITI via Auburn SSO to allow CITI training completions to be accurately recorded in Auburn University systems.

For questions or more information, please contact Milly Tye (milly@auburn.edu).

Faculty Research Spotlight

Dr. Pengyu Chen

When asked, Dr. Pengyu Chen, Associate Professor in Materials Engineering, said one publication that particularly defines his research is "Machine-Learning-Assisted Microfluidic Nanoplasmonic Digital Immunoassay for Cytokine Storm Profiling in COVID-19 Patients," published in *ACS Nano*. This study detailed a design for a machine-learning-assisted immunoassay tailored for efficient cytokine storm monitoring in COVID-19 patients. The assay can detect six key cytokines, offers an approach for rapid and accurate cytokine profiling in patients, and represents a significant advancement in precision immune monitoring and diagnosis. "It became evident," Dr. Chen says, "that there was an unmet need for an advanced immunoassay system." He says this niche "inspired [him] to develop a solution that not only addressed the immediate challenges posed by the pandemic but also pushes forward the boundaries of immune monitoring for future applications."

Chen says his broad research interests "lie at the intersection of nanotechnology, biotechnology, and engineering, seeking to leverage advanced materials and methods for breakthroughs in biosensing, disease diagnosis, cell analysis, and understanding cellular communications." In the future, Dr. Chen is interested in exploring broader infectious disease monitoring, cancer immunotherapy, advanced machine learning techniques, nanomaterials and biosensors, and personalized medicine. He would like to collaborate with experts in computational biology and bioinformatics, clinical collaborators, medical device engineers, data scientists and machine learning experts, and manufacturing and scalability experts.

Gao, Z., Song, Y., Hsiao, T. Y., He, J., Wang, C., Shen, J., MacLachlan, A., Dai, S., Singer, B. H., Kurabayashi, K., & Chen, P. (2021). Machine-Learning-Assisted Microfluidic Nanoplasmonic Digital Immunoassay for Cytokine Storm Profiling in COVID-19 Patients. *ACS Nano,* 15(11), 18023–18036. https://doi.org/10.1021/acsnano.1c06623

Funding Opportunities

BIL Consumer Electronics Battery Recycling, Reprocessing, and Battery Collection

Due: November 29, 2023
US DOE National Energy Technology Laboratory
Areas of interest: batteries, electric and hybrid vehicles, energy consumption, energy sciences, recycling

The Bipartisan Infrastructure Law offers this funding opportunity to support the recycling of consumer electronics batteries and battery-containing devices. Considered projects will accomplish this by increasing participation by consumers in recycling programs, improving the economics of consumer battery recycling, and increasing the number of these programs, especially in state and local entities.

Read more **here.**

Federal Aviation's Sustainable Transition via Sustainable Aviation Fuels (FAST-SAF) and Low-Emission Aviation Technologies (FAST-Tech) Grant Program

Due: November 27, 2023
Federal Aviation Administration (FAA)
Areas of interest: energy, environment, sustainable transportation

To reduce greenhouse gas emissions from aviation, this FAA program support projects that produce, transport, blend or store Sustainable Aviation Fuels, or ones that develop, demonstrate, or apply low-emission aviation technologies. This opportunity requires 25% cost share.

Read more **here.**