ENGINEERING
DEPARTMENT OF CHEMICAL & BIOMOLECULAR ENGINEERING

NEWS OF THE WEEK

OCTOBER 4, 2021

CBE IN THE NEWS

- **Updates regarding the COVID-19 vaccine**
- **LSU, Delaware to Develop Chemical Manufacturing Processes Using CO2 Feedstocks and Renewable Energy**
- **Delivery of medicine in the body**
- Congratulations to Jacob Hewes for being chosen as an awardee for the Future Leaders in Chemical Engineering symposium
- **Yamaira Ines Gonzalez-Gonzalez completes the Associate Safety Professional (ASP) Certification**. Congratulate Dr. Yamy Gonzalez for completing all requirements for the Associate Safety Professional (ASP) certification. This highly respected certification is awarded by the Board of Certified Safety Professionals® (BCSP®) to individuals who meet eligibility and experience criteria in the safety, health, and environmental (SH&E) discipline and have passed a rigorous examination. Safety issues have become more complex, and today's safety professional must continually be better qualified. "Safety, health, and environmental practice relies on the knowledge and skills of its practitioners," explains BCSP's CEO, Christy Uden, CAE, IOM. "We are proud of those who join us in advancing safety through quality certification."BCSP credential holders are among the most highly trained, educated, and experienced individuals in the safety field. Having achieved a BCSP certification shows that the individual has mastered the core competency required for professional safety practice. Certificants recertify every five years to maintain certification, ensuring they remain knowledgeable in their practice and continuously improve the profession.
- **Congratulations to Carlonda Russell Reilly for being named to the Women in Manufacturing Education Foundations' (WiMEF) 2021 class of Women in Manufacturing Hall of Fame**

DEPARTMENT'S SEMINAR/EVENTS:

- **CBE Seminar Series**
    - **Allan P. Colburn Memorial Lecture**
      Dr. Matthew Panzer, Tufts University and UD Chemical Engineering Alumni
      Friday, October 29, 2021 @ 10:00 AM in 102 CLB
      via Zoom: **https://udel.zoom.us/j/98079957563**
      Design of Polymeric Scaffolds for Nonaqueous Ionogel Electrolytes

    - **Kurt Wohl Memorial Lecture**
      Dr. Jingguang Chen, Columbia University
      Friday, November 19, 2021 @ 10:00 AM in 102 CLB
      via Zoom: **https://udel.zoom.us/j/97520210237**
      Chemical Engineering Approaches for Catalytic Reduction of CO2

    - **Dr. Jacinta Conrad,** University of Houston
      Friday, December 3, 2021 @ 10:00 AM in 102 CLB
      via Zoom: **https://udel.zoom.us/j/92635728693**
      Nanoparticle Transport in Crowded, Confined Media

OTHER DEPARTMENT'S SEMINAR/EVENTS:

- **Department of Physics & Astronomy**
    - **Nicholas J. Borys, Montana State University**
      Monday, October 11, 2021
      11:00 PM via Zoom: **https://udel.zoom.us/j/93198678016**
      "Exploring Exciton-Enabled Nanoscale Optoelectronics in 2D Semiconductors"
    - **Mingzhong Wu, Colorado State University**
      Monday, October 18, 2021
      11:00 AM via Zoom: **https://udel.zoom.us/j/91648134726**
      When a Magnetic Insulator Meets a Topological Insulator

- **Mathematical Sciences Department Seminars**
    - **Inverse Problems & Analysis**
      Tuesday, October 5, 20213:30 PM via Zoom
      Speaker: Qiyu Sun, University of Central Florida
      Title: "Polynomial filters of multiple commutative shifts and their distributed implementation"

    - **Quantum Information and Computing Seminar**
      Wednesday, October 6, 2021
      11:00 PM in 336 EWG and via Zoom: **https://udel.zoom.us/j/98508376489**
      Passcode: QIC
      Speaker: Travis Russel, US Military Academy
      Title: "An operator system approach to quantum correlations"
      Travis Russel will be traveling to UD for seminar

    - **Hallenbeck Graduate Student Seminar (HGSS)**
      Wednesday, October 6, 2021
      12:00 PM at 336 EWG
      Speaker: Jerome Roehm, University of Delaware
      Title: "On the Central Limit Theorem of Information Content for Log-Concave Densities"

    - **Discrete Mathematics**
      Thursday, October 7, 2021
      1:00 PM at via Zoom
      Speaker: Himanshu Gupta, University of Delaware
      Title: "The least Euclidean distortion constant of a distance-regular graph"

    - **Applied Mathematics and Mathematical Medicine & Zoom and Biology Seminar (AMMMB)**
      Friday, October 8, 2021
      10:10 AM at 336 EWG and via Zoom: **https://udel.zoom.us/j/98758622578**
      Passcode: 916186
      Speaker: Daniel Anderson, George Mason University
      Title: "Tear film dynamics with blinking and contact lens motion"

    - **Numerical Analysis and PDE**
      Friday, October 8, 2021
      11:00 AM at via Zoom
      Speaker: Ben Civiletti, University of Delaware
      Title: "A Hybrid Coordinate Transform Method for Electromagnetic Scattering by a Grating"

    - **Teaching Seminar**
      Friday, October 8, 2021
      2:30 PM at via Zoom
      Speaker: Michelle Cirillo, University of Delaware
      Title: "Findings from a Secondary Proof Study that Could Inform the Teaching of Proof in Undergraduate Mathematics"

JOBS/RECRUITING

- **University of Houston**
  Position: Postdoctoral Positions in Zerze lab (GHZ)
  Brief description: The William A. Brookshire Department of Chemical & Biomolecular Engineering in the Cullen College of Engineering of the University of Houston invites candidates to apply for one or more postdoctoral fellow or research faculty positions that are available in the Zerze Lab to work on molecular modeling and simulations of protein phase behavior. Research involves developing models; simulation and analysis techniques to study cancer-related transcriptional condensates.

  Position: Postdoctoral Fellow
  Brief description: The William A. Brookshire Department of Chemical & Biomolecular Engineering at the University of Houston invites candidates to apply for a postdoctoral fellow position in the Mountziaris Laboratory. Research will focus on developing efficient and scalable methods for synthesis of nanoscale photonic materials, fundamental studies of nucleation and growth mechanisms, surface modification, and functionalization for multiplexed biological sensing and drug discovery applications.

  Position: Assistant Professor – Applied Data Science, Artificial Intelligence & High-Performance Computing – (FAC001967)
  Brief description: The Cullen College of Engineering at the University of Houston seeks to hire a Presidential Frontier Faculty tenure-track faculty member at the rank of Assistant Professor. The Presidential Frontier Faculty program is a university-wide integrated interdisciplinary hiring campaign that is overseen by central university leadership, and encompasses hiring a large cohort of convergence research faculty to work on health, energy, sustainability and security. We are seeking an outstanding candidate with the potential for exceptional research, excellence in teaching, and a clear commitment to enhancing the diversity of the faculty, graduate, and undergraduate student population. The successful candidates will be appointed to a Department in the Cullen College of Engineering based on their background and expertise.

  Position: Assistant Professor – Applied Data Science, Artificial Intelligence & High-Performance Computing – (FAC001970)
  Brief description: The Cullen College of Engineering at the University of Houston seeks to hire a Presidential Frontier Faculty tenure-track faculty member at the rank of Assistant Professor. The Presidential Frontier Faculty program is a university-wide integrated interdisciplinary hiring campaign that is overseen by central university leadership, and encompasses hiring a large cohort of convergence research faculty to work on health, energy, sustainability and security. We are seeking an outstanding candidate with the potential for exceptional research, excellence in teaching, and a clear commitment to enhancing the diversity of the faculty, graduate, and undergraduate student population. The successful candidates will be appointed to a Department in the Cullen College of Engineering based on their background and expertise.

- **Syracuse University**
  Position: Assistant Professor Functional Materials/ Synthetic Biology
  Brief description: The Department of Biomedical and Chemical Engineering (BMCE) in the College of Engineering and Computer Science at Syracuse University (**bmce.syr.edu**) is seeking applicants for two positions at the rank of Assistant Professor in the field of (i) Functional Materials and (ii) Synthetic Biology. These positions are part of an ambitious Invest Syracuse Cluster Hire Initiative in the broad area of bioinspired science and technology.

  Position: Assistant Professor (tenure-track) Biomedical & Chemical Engineering
  Brief description: The Department of Biomedical and Chemical Engineering (BMCE) at Syracuse University (**http://bmce.syr.edu/**) is seeking applicants for a tenure-track faculty position at the rank of Assistant Professor. This position is part of a multi-year, cluster hiring initiative, and we are targeting candidates with expertise in Advanced Materials with applications in Energy and/or Environmental Sustainability.

- **Iowa State University**
  Position: Chemical and Biological Engineering – Assistant/Associate/Full Professor
  Brief description: The Department of Chemical and Biological Engineering in the College of Engineering at Iowa State University invites applications for multiple tenure-track or tenured faculty positions with research expertise in: biomaterials; diagnostic, therapeutic and medical devices/ systems; systems and synthetic biology; bioimaging; or AI-driven biotechnology. Exceptional candidates with commensurate experience and proven track record will be considered for Associate and Full Professor ranks.

- **University of California, Santa Barbara**
  Position: Assistant Professor of Chemical Engineering
  Brief description: The Chemical Engineering Department in the College of Engineering at the University of California, Santa Barbara is seeking applications as part of an external search for one tenure-track Assistant Professor position. The University is especially interested in candidates who can contribute to the diversity and excellence of the academic community through research, teaching, and service as appropriate to the position.

- **Tulane University**
  Position: The Catherine and Henry Boh Professorship in Engineering
  Brief description: The Chemical & Biomolecular Engineering Department at Tulane University seeks outstanding candidates for the Boh Professor in Chemical and Biomolecular Engineering, at the rank of Full Professor. Exceptional candidates at the Associate Professor rank will also be considered. Competitive applicants will demonstrate internationally recognized research excellence and a commitment to teaching at the undergraduate and graduate levels. This search is focused on candidates with a background in life science.

  Position: Assistant Professor
  Brief description: The Chemical & Biomolecular Engineering Department at Tulane University seeks outstanding candidates for an opening at the rank of Assistant Professor. Competitive applicants will demonstrate research excellence and a commitment to teaching at the undergraduate and graduate levels. This search is focused on candidates with a background in life science, with a particular emphasis in computational systems biology.

- **New Jersey Institute of Technology (NJIT)**
  Position: Assistant Professor
  Brief description: A tenure-track position at the level of Assistant Professor with research expertise and proven research record in the area of membrane science and engineering. Conduct research and teach graduate and undergraduate courses in the department. Develop and offer courses in chemical and/or materials engineering. Research expertise and interest in membrane science and engineering. Candidates focusing on experimental as well as theoretical and computational research in membranes are welcome. Candidates from under-represented groups are especially encouraged to apply. The successful candidate should have a proven track record of research accomplishments and a commitment to teaching excellence.

- **University of Minnesota**
  Position: Assistant Professor, Associate Professor or Professor in Chemical Engineering and Materials Science
  Brief description: The Department of Chemical Engineering and Materials Science (**https://cse.umn.edu/cems**) at the University of Minnesota seeks to fill one full-time faculty position at the Assistant Professor (tenure-track), Associate Professor (tenured) or Professor (tenured) level. The successful candidate will be expected to carry out vigorous programs of original research at a world-class level, advise a diverse group of graduate students, teach a broad range of undergraduate and graduate courses in the Department of Chemical Engineering and Materials Science (CEMS), and participate in Departmental and University governance.

- **Georgia Tech**
  Position: Faculty Positions in Chemical and Biomolecular Engineering
  Brief description: The School of Chemical and Biomolecular Engineering at the Georgia Institute of Technology in Atlanta, GA invites applications for a tenure-track faculty position in Chemical and Biomolecular Engineering. Applicants will be considered at all ranks. All areas of chemical and biomolecular engineering are of interest, including but not limited to: chemical and synthetic biology, biotechnology and bioprocess engineering, climate and atmospheric science, energy and sustainability, fluid mechanics and rheology, polymers and soft matter, process intensification and systems engineering, nanoscience and self-assembly, materials processing and nanomanufacturing, catalysis and reaction engineering, and separations. Candidates are expected to teach and mentor a diverse student body. Along with undergraduate and graduate teaching, each position requires a balance of research and service responsibilities.

- **Massachusetts Institute of Technology (MIT)**
  Position: Faculty Positions in Chemical and Biomolecular Engineering
  Brief description: The Massachusetts Institute of Technology (MIT), Department of Chemical Engineering (**https://cheme.mit.edu/**) in Cambridge, Massachusetts invites candidates for faculty positions starting July 2022 or as soon thereafter as possible. Appointment will be at the Assistant or untenured Associate Professor level. In special cases, a senior faculty appointment may be possible. Candidates must have a Ph.D. in Chemical Engineering or a related field by the start of employment. Candidates with research and teaching interests in every area relevant to the field of Chemical Engineering will be considered, including candidates with areas of research in process systems engineering, biomedical engineering and advanced technologies for health and the environment, sustainability, biomanufacturing, bioprocess, or applied synthetic biology, energy systems, and materials design and engineering. All strong candidates in Chemical Engineering fields are encouraged to apply.

- **University of South Florida**
  Position: Assistant Professor – Chemical, Biological, & Materials Engineering
  Brief description: The Department of Chemical, Biological, and Materials Engineering at the University of South Florida invites applications for tenure-track Assistant Professor faculty positions, expected to commence August 2021 or thereafter. Candidates for tenure-track Assistant Professor positions should have: (1) a demonstrated excellence in scholarly research and publications, (2) a demonstrated record of or potential for sustaining an externally funded research program, and (3) a strong commitment to and potential for teaching and mentoring undergraduate and graduate students. Applications from all areas of chemical engineering and its related fields are welcome. Applicants working in the fields of bioengineering and/or biotechnology, energy and sustainability, catalysis and reaction engineering, computational modeling and simulation, advanced materials, and separations are particularly encouraged to apply.

  Position: Associate Professor – Chemical, Biological, & Materials Engineering
  Brief description: The Department of Chemical, Biological, and Materials Engineering at the University of South Florida invites applications for tenure/tenure-track Associate Professor faculty positions, expected to commence August 2021 or thereafter. Exceptional applicants for the rank of Associate Professor must have a strong record of externally funded research, outstanding scholarly work and publications, demonstrated excellence in teaching, and national and/or international recognition for their work. Applications from all areas of chemical engineering and its related fields are welcome. Applicants working in the fields of bioengineering and/or biotechnology, energy and sustainability, catalysis and reaction engineering, computational modeling and simulation, advanced materials, and separations are particularly encouraged to apply.

  Position: Professor – Chemical, Biological, & Materials Engineering
  Brief description: The Department of Chemical, Biological, and Materials Engineering at the University of South Florida invites applications for tenure Professor faculty positions, expected to commence August 2021 or thereafter. Exceptional applicants for the rank of Professor must have a strong record of externally funded research, outstanding scholarly work and publications, demonstrated excellence in teaching, and national and/or international recognition for their work. Applications from all areas of chemical engineering and its related fields are welcome. Applicants working in the fields of bioengineering and/or biotechnology, energy and sustainability, catalysis and reaction engineering, computational modeling and simulation, advanced materials, and separations are particularly encouraged to apply.

- **University of Virginia**
  Position: Open Rank Faculty Position in Chemical Engineering
  Brief description: The Department of Chemical Engineering at the University of Virginia invites applicants for a tenured or tenure-track position at the rank of assistant, associate, or full professor. Rank and tenure status will be commensurate with experience level. Candidates must have a PhD in Chemical Engineering or a related field at the time of appointment, a record of excellence in scientific research, a commitment to teaching at the undergraduate and graduate levels, and evidence of commitment to diversity, inclusion, and advancing understanding and outcomes for underrepresented groups. Research interests in all areas related to chemical engineering will be considered, including computation/simulation and biotechnology/bioprocessing work complementing current departmental strengths.

- **Oregon State University**
  Position: Assistant/Associate/Full Professor
  Brief description: The School of Chemical, Biological, and Environmental Engineering (CBEE) at Oregon State University seeks to fill one or more full-time (1.00 FTE), tenure-track, nine-month assistant professor, associate professor, or full professor positions in bioengineering to begin Sept. 16, 2022.

- **Vanderbilt University**
  Position: Faculty Positions in Chemical and Biomolecular Engineering
  Brief description: The Department of Chemical and Biomolecular Engineering at Vanderbilt University (VU ChBE) invites applications for one or more tenured/tenure-track faculty positions at any rank. We seek outstanding candidates with principal efforts toward experiments and/or simulations in the areas of bioengineering (synthetic biology, biomaterials, tissue engineering, biosystems engineering, and regenerative medicine), materials (polymers, nanomaterials, separations, catalysis), and energy (solar, fuel cells, biofuels, batteries, supercapacitors). We seek candidates who can synergistically leverage our strong interdisciplinary environment to establish a leading research program that applies engineering approaches to solve key societal problems. This opportunity is part of the Vanderbilt School of Engineering's strategic directions in 'Regenerative Medicine,' 'Nanoscale Science and Engineering,' and 'Energy and Natural Resources' and coincides with the expansion of the new 230,000 sq ft Engineering and Science Building.

- **Texas Tech University**
  Position: Associate Professor
  Brief description: Successful candidates will be expected to develop nationally and internationally recognized and externally funded research programs, develop departmental and multidisciplinary collaborations, teach core graduate and undergraduate courses in chemical engineering and develop new courses, and perform internal and professional service at a level commensurate with rank. Candidates who have very strong records of scholarship supported by extramural funding and who have the proven capacity or clear potential to bring externally sponsored research to Texas Tech University are encouraged to apply. Service duties include program-building, as well as a commitment to extra-curricular activities. Service to the department, college, university, and community is expected.

  Position: Assistant Professor
  Brief description: Successful candidates will be expected to develop nationally and internationally recognized and externally funded research programs, develop departmental and multidisciplinary collaborations, foster partnerships within and outside Texas Tech University as well as industry, teach core graduate and undergraduate courses in chemical engineering, develop new courses (including online/distance courses), engage in strategic outreach and engaged scholarship, and perform internal and professional service.

- **Bristol Myers Squibb**
  Position: Scientist, Downstream Process Development
  Brief description: The Scientist position will be part of the Global Process Development Downstream department in Devens, MA that is responsible for early and late-stage process development of BMS' growing biologics pipeline. This role is within the Biologics Development organization in Devens, MA. The candidate will work with cross- functional teams to develop and characterize downstream processes. The candidate will drive platform purification process strategies, and technology development projects. The candidate will actively partner with the overall downstream team, upstream team, Manufacturing, MS&T, Analytical Development, Formulation Development, and Program Management.

- **Evonik**
  Position: Postdoc Position
  Brief description: The primary purpose of this position is to provide technical capability to support an ongoing R&D project to design, synthesize and test new amines, blocked amines, and polymeric amine structures for use in polyurethane additive manufacturing applications. There are additional projects to scout new concepts and application areas for the business line. This will require development of new application test methods and formulations as well as exploration of chemistries to provide unique solutions in the high-density polyurethane market.

Available positions can be found on the Chemical & Biomolecular Engineering opportunity website, so be sure to check it regularly.