

# *UVA Partnership with MAXNET Energy*

## *Research Initiative with Max Planck Institute for Chemical Energy Conversion*



The University of Virginia has been selected to join MAXNET Energy, a new initiative of Germany's Max Planck Society (MPS).

MAXNET Energy is comprised of seven Max Planck Institutes, and UVA joins Cardiff University as the only external members.

This partnership will enable UVA faculty and students to conduct collaborative research on new energy processes. Initially funded seed projects include solar process heat, photo-electrocatalysis (sunlight to fuels) and natural gas to liquid fuels.

UVA and the MPS have committed ~\$4M (\$2M each) in seed funding over 5 years.

Formed in 1911, Max Planck is Germany's most recognized and acclaimed research organization. They have had 32 Nobel laureates among 82 Max Planck Institutes spanning diverse fields (natural sciences, life sciences, social sciences, and the humanities). 2006 Times Higher Education rankings of non-university research institutions (based on international peer review) placed the Max Planck Society as the No.1 non-academic institution in the world for science research.





-PLANCK-GESELLSCHAFT

## UVA – Max Planck Society Global Partnership: Benefits to UVA



- Opportunity to develop self-sustaining and highly impactful collaborative research with the Max Planck Society and expanded research at UVA in energy sciences.
- Three initial collaborative seed projects involving faculty, Max Planck scientists, postdocs and graduate students.
- Global research experience with premier international institute provides exciting research and educational opportunities for UVA students.
- Access to world-class research partners/student mentors, and to research labs and equipment not available at UVA.
- Opportunity to develop externally funded collaborative projects focused on new energy processes.

### Initial Projects

Solar Process Heat: Hossein Haj-Hariri

Photo-electrocatalysis (Sunlight to Fuels): Giovanni Zangari

Natural Gas to Liquid Fuels: Brent Gunnoe & Bob Davis

### Opportunities to Support UVA-MAXNET Energy Partnership

- Seed new collaborative research projects to develop new energy projects and processes.
- Support students and young scientists through graduate and postdoc fellowships.
- Gain visibility and insights through meeting and conference sponsorships.

Consider funding a project!



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Brent Gunnoe received his BA from West Virginia University in 1993, where he was a Presidential Scholar and was awarded the Outstanding Junior (1992) and Senior (1993) Chemistry Student. After obtaining a Ph. D. from the University of North Carolina (1997) under the director of Professor Joseph Templeton and a serving as a postdoctoral researcher at the University of Virginia (1997-1999), Professor Gunnoe began his independent career as an Assistant Professor at North Carolina State University. In 2008 he moved to the University of Virginia as Professor of Chemistry. He is co-author of three book chapters and 124 referred journal publications and has delivered over 100 invited lectures that are focused on fundamental aspects of catalyst technologies applied to the development of new energy resources as well as improved processes for the petrochemical industry and fine chemical synthesis. He was the recipient of a National Science Foundation CAREER Award, the Sigma Xi Faculty Research Award, an Alfred P. Sloan Research Fellowship and the LeRoy and Elva Martin Award for Teaching Excellence. He currently serves as Associate Editor for ACS Catalysis and as Director of the Center for Catalytic Hydrocarbon Functionalization (CCHF), which is an Energy Frontier Research Center funded by the United States Department of Energy.



**Robert Davis**  
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Robert Davis obtained his Ph.D. degree in Chemical Engineering from Stanford University in 1989. He subsequently worked as a postdoctoral research fellow in the Chemistry Department at the University of Namur in Belgium. He joined the faculty in Chemical Engineering at the University of Virginia in 1990 as an assistant professor, was promoted to associate professor in 1996, full professor in 2002, and Earnest Jackson Oglesby Professor in 2009. Professor Davis also served as the Chair of Chemical Engineering at the University of Virginia from 2002 to 2011. He received the Emmett Award of the North American Catalysis Society, the NSF Young Investigator Award, the DuPont Young Professor Award, the Union Carbide Innovation Recognition Award, and the UVa Rodman Scholars Award for Excellence in Teaching. Professor Davis has co-authored more than 130 publications, 1 patent and 1 textbook, entitled "Fundamentals of Chemical Reaction Engineering". Professor Davis has served as President of the Southeastern Catalysis Society, Chair of the 2006 Gordon Research Conference on Catalysis, Chair of Catalysis Programming of the AIChE, Chair of a US government panel charged with worldwide assessment of Catalysis by Nanostructured Materials, Director of the Catalysis and Reaction Engineering Division of the AIChE, Director of the North American Catalysis Society, Co-Chair of an International Catalysis Workshop in China, member of the Advisory Board of the International Conferences on Solid Acid and Base Catalysis, and member of the editorial boards of Journal of Catalysis, Applied Catalysis A and B, Journal of Molecular Catalysis A, ChemCatChem and ACS Catalysis.



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