

NEXT GENERATION ELECTROCHEMISTRY (NGenE) LAUNCHED

presented by

University of Illinois at Chicago
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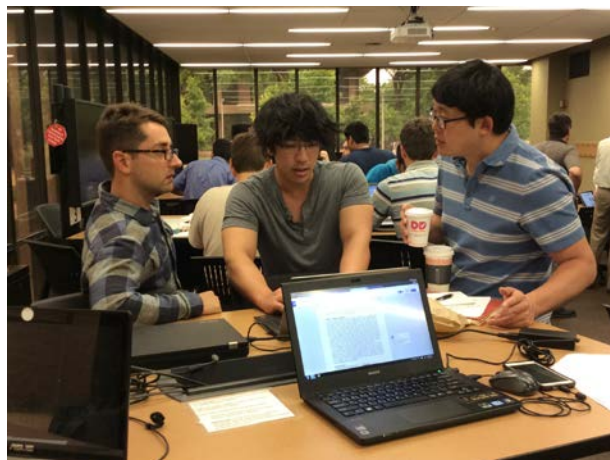
The Electrochemical Society (ECS), Materials Research Society (MRS)

The inaugural edition of [Next Generation Electrochemistry](#) (NGenE), a weeklong summer research institute on the frontiers of electrochemistry, took place at the University of Illinois at Chicago (UIC), June 13-17, 2016. The program welcomed 22 advanced graduate students and postdocs and 13 world-renowned experts to address the research frontiers of electrochemistry and the application of innovative strategies to address them.

The inaugural program focused on concepts for the generation, conversion, and storage of energy. Experts presented high-level lectures related to the current body of knowledge, highlighting critical gaps in the frontier that need to be explored and surpassed for transformative advances. Vigorous student-driven discussions followed each lecture. The lectures were complemented with demonstrations of cutting-edge tools such as UIC's *in situ* electron microscopy, and visits to large scale user facilities at ANL, such as the Advanced Photon Source.

Participants were challenged to identify a frontier fundamental question in electrochemistry and to develop a proposal to resolve their chosen frontier issue using the most modern and upcoming methods. They worked in teams of four or five to develop their own critical and original thinking, with faculty providing mentoring during hour-long sessions of project discussion. They presented their innovative solutions to their peers and the faculty, who acted as reviewers. The lively discussions and stimulating atmosphere of the workshop produced many creative and engaging proposals. As hoped for, after the conclusion of the program, continuing interactions between faculty and students have materialized.

Plans for NGenE 2017 are underway. The organizing team seeks input from key players in the community to shape the critical features of our program, focusing on fundamental aspects of electrochemical science. While the scientific emphasis will evolve, NGenE will maintain an overlapping roster of faculty from year to year as it builds a continuity of challenges and opportunities in electrochemistry. The research projects will be refined to target fundamental challenges at the frontier of electrochemistry and original, innovative approaches to overcoming them.



(Left) Inaugural Lecture by Prof. Dan Scherson (Case Western Reserve University).

(Right) NGenE 2016 students during a discussion session, preparing their research projects.