

3rd Annual Next Generation Electrochemistry (NGenE) 2018 Workshop

<i>presented by</i>	<i>in partnership with</i>	<i>sponsored by</i>	<i>endorsed by</i>
University of Illinois at Chicago Jordi Cabana, Director George Crabtree, Supporting Director	Argonne National Laboratory	Bio-Logic USA Gamry Instruments	The Electrochemical Society (ECS) Materials Research Society (MRS)



The 3rd edition of [Next Generation Electrochemistry](#) (NGenE) took place at the University of Illinois at Chicago (UIC), June 4-8, 2018. During NGenE 2018, 39 advanced graduate students and postdocs and 8 world-renowned experts gathered to discuss the research frontiers in electrochemistry. The theme of this edition was “*Electrochemistry in Motion*”. Lectures by the NGenE faculty provided a high-level overview of the current body of knowledge, highlighting critical gaps in mechanistic understanding of important electrochemical processes which prevent transformative advances. They subsequently charted possible paths forward involving innovative approaches, with an emphasis on creating “movies” of the underlying reactions as they happen, at the highest possible chemical, temporal and spatial definition. The lectures were complemented with demonstrations of cutting-edge tools such as UIC’s *in situ* electron microscopy, and a visit to facilities at Argonne National Laboratory.

NGenE is centered on its participants, who lead discussions of the contents of each lecture, and are encouraged to vigorously probe existing concepts. During the week, the participants also conducted a project in teams of four or five. Their charge consisted of identifying a frontier fundamental question under the umbrella of “*Electrochemistry in Motion*”, with an established connections to the lectures in the program. They subsequently developed a research plan to answer this question using the most modern and upcoming methods, inspired by their existing knowledge and new understanding developed during the summer institute. At the end of the week, the NGenE participants summarized their project in a presentation to their peers and the faculty, who provided feedback. The lively discussions and stimulating atmosphere of the workshop produced many creative and engaging proposals. The program was closed with a career panel moderated by the NGenE organizers, where students had the opportunity to explore future professional prospects in the area of electrochemistry, driven by the experience of the current generation.

Looking forward to 2019, the organizing team continues to seek input from the community to shape the critical features of our program, focusing on fundamental aspects of electrochemical science. The team can be reached at uic.ngene@gmail.com. The fourth edition of NGenE will take place in June 3-7, 2019. Applications for the program will open soon. Please [visit our website](#) frequently for deadline updates.