セミナーのお知らせ

開催日時：2026 年 4 月 13 日（月）13 時から 14 時 20 分
開催場所：理学部 E210 講義室

Electronic and Ionically Conducting Polymers for Biologically Inspired Sensing

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Abstract Ionically and electronically conducting polymers are key components in emerging electronic, sensing and energy applications. Understanding their structure and properties is important for designing new systems with higher performance and reduced cost. Our group develops these materials to advance a range of technologies. This presentation will focus on a current area being pursued in the group, the development of biologically inspired artificial olfaction. We are developing chemically diverse sensor arrays and signal processing approaches with the goal of creating CMOS integrated circuits that would impart the one remaining sense to machines.

Biography Dr. Freund was born in Gainesville Florida in 1964. He received a B.S. Degree in Chemistry from Florida Atlantic University in 1987 and his Ph.D. in 1992 from the University of Florida. Subsequently, he became a Postdoctoral Fellow in the Department of Chemistry at the California Institute of Technology where his research contributions helped to establish a multi-investigator interdisciplinary research program on the development olfactory-inspired sensor arrays. He began his academic career as an Assistant Professor of Chemistry at Lehigh University before moving back to Caltech as the Director of the Materials Science Center in the Beckman Institute. In 2002, he moved to the University of Manitoba where he attained the rank of Professor and Tier 1 Canada Research Chair in Electronic Materials. During his thirteen years at the University of Manitoba he has been either lead or co-PI on projects securing over $30M in research and infrastructure funding through federal and regional funding sources, which he leveraged to establish the Manitoba Institute for Materials as Director (http://materials.umanitoba.ca). He joined the faculty at Dalhousie University in 2018 where he is the Harry Shirreff Professor of Chemical Research and Director of the Clean Technologies Research Institute (http://dal.ca/ctri). While at Dal he has established an NSERC funded, graduate training program in energy sustainability (http://energy.dal.ca) and has been involved in raising over $10M in research and infrastructure funding. Dr. Freund has published over 125 articles with approximately 10,000 citations and has been issued 28 US and 15 international patents.

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本セミナーは、統合生命科学研究科セミナーとして、プログラム共同セミナーの対象です。