**PYRROLE-BASED POROUS MATERIALS (AND FRIENDS)**

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This presentation will provide a summary of recent collaborative efforts to create porous materials based on various pyrrolic macrocycles, including calix[4]pyrrole. Particular attention will be devoted to polymeric networks that incorporate this well-characterized anion and ion pair receptor within their extended structural frameworks. These systems are being explored in the context of several potential application areas, including waste remediation, halogen capture, perfluorinated organic acid sensing, and polar compound separations. Complementary efforts targeting these objectives, involving bipyridine- and zinc-based cage structures, will also be discussed. Early and still-ongoing studies of receptor-containing soft materials that target hard ions, such as lithium cation and the hydroxide anion, will be presented to provide context. The use of ion recognition materials to encode information will be summarized as time permits.

This presentation is made possible by the dedicated efforts of numerous students and postdoctoral fellows who will be thanked explicitly during the lecture, as well as collaborations with a number of groups, including those of Profs. Philip A. Gale, Han-Yuan Gong, Qing He, Feihe Huang, Jan Jeppesen, Xiaofan Ji, Xiaodong Chi, Niveen Khashab, Jong Seung Kim, Sung Kuk Kim, Changhee Lee, Bruce A. Moyer, Zachariah A. Page, Jung Su Park, Benzhong Tang, Hongyu Wang, and George Schatz.

This project is currently supported by the U.S. National Science Foundation, the U.S. DOE Office of Basic Energy Sciences, the R. A. Welch Foundation, and KAUST.

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**Biography**

Prof. Jonathan L. Sessler was born in Urbana, Illinois, USA on May 20, 1956. He received a B.S. degree (with Highest Honors) in chemistry in 1977 from the University of California, Berkeley. He obtained a Ph.D. in organic chemistry from Stanford University in 1982 (supervisor: Professor James P. Collman). He was a NSF-CNRS and NSF-NATO Postdoctoral Fellow with Professor Jean-Marie Lehn at L'Université Louis Pasteur de Strasbourg, France. He was then a JSPS Visiting Scientist in Professor Tabushi's group in Kyoto, Japan. In September, 1984 he accepted a position as Assistant Professor of Chemistry at the University of Texas at Austin, where he is currently the Doherty-Welch Chair. Dr. Sessler has authored or coauthored over 900 research publications, written two books (with Dr. Steven J. Weghorn and Drs. Philip A. Gale and Won-Seob Cho, respectively), edited two others (with Drs. Susan Doctrow, Tom McMurry, and Stephen J. Lippard, Placido Neri and Mei-Xiang Wang), and been an inventor of record on approximately 90 issued U.S. Patents. To date, Dr. Sessler’s work has been featured on more than 50 journal or book covers. His current WoS H-index is 118. From 2008-2019 Dr. Sessler served as an Associate Editor for *ChemComm*. Dr. Sessler was a co-founder (with Dr. Richard A. Miller) of Pharmacyclics, Inc., which was acquired by AbbVie for $21B in 2015. His texaphyrin technology is now the basis for a new company, InnovoTex, Inc. Dr. Sessler has held guest professorships at several universities, including from 2015 to 2020 at Shanghai University. He has served as the co-organizer of several international conferences in porphyrin, supramolecular, and macrocyclic chemistry, as well as numerous American Chemical Society symposia. In addition to English, Dr. Sessler speaks French reasonably well, as well as Hebrew and Spanish, and knows a little bit of German and Japanese. Dr. Sessler’s work has been recognized with several awards, including the American Chemical Society Cope Scholar Award, the Royal Society of Chemistry Centenary Prize, the Southwest Regional American Chemical Society Award, the Molecular Sensors-Molecular Logic Gates Award, the CASE award, the Hans Fischer Award, the Thomas Dougherty Award in Photodynamic Therapy, the C. David Gutsche Award in Calixarene Chemistry the Foreign Associate Award of the Asian Society for Porphyrins and Phthalocyanines, a Pioneer Award from the American Institute of Chemists, the Ronald Breslow Award in Biomimetic Chemistry from the American Chemical Society, the Mond-Nyholm award from the Royal Society of Chemistry, and the MASC Supramolecular Chemistry award from the Royal Society of Chemistry. Dr. Sessler is a member of the U.S. National Academy of Inventors and was named Inventor of the Year at The Univ. of Texas at Austin in 2016. Dr. Sessler was elected a member of the European Academy of Sciences in 2019. That same year he was named The University of Texas Co-op Career Research awardee, which is the highest prize given for research at his home institution. Dr. Sessler is a Fellow of the American Chemical Society, the Royal Chemical Society, and of the American Association for the Advancement of Science. He was elected to the US National Academy of Sciences in April of 2021 and the American Academy of Arts and Sciences in April of 2022. He received both the Mond-Nyholm and MASC Supramolecular Chemistry awards from the Royal Society of Chemistry that same year. He was just named the 2024 Stoddart Science Fund Chemist Awardee.

