that offers potential computational advantages. A structural similarity with bosonic quantum field theories suggests a powerful new FTS approach to probe super fluidity and other exotic collective phenomena in cold bosons.

Fredrickson received BS and PhD degrees in chemical engineering from the University of Florida and Stanford University, respectively. He was a member of the technical staff at Bell Laboratories from 1984 to 1990, and has been on the chemical engineering and materials faculties at the University of California, Santa Barbara, since that time. Fredrickson has advised a wide range of companies in the chemical and materials sectors and has served as chief technology officer of Mitsubishi Chemical Holdings Corporation during 2014–2017. He has received major research awards from the American Physical and Chemical Societies and the American Institute of Chemical Engineers, and was elected to the US National Academy of Engineering and the American Academy of Arts and Sciences.

Joanna Aizenberg selected as MRS Medalist for development of synthesis routes

Joanna Aizenberg, Harvard John A. Paulson School of Engineering and Applied Sciences, has received the 2017 Materials Research Society (MRS) Medal "for developing new synthesis routes inspired by biological principles for the fabrication of advanced complex multifunctional materials." Aizenberg will be recognized during the Awards Ceremony at the 2017 MRS Fall Meeting in Boston.

Aizenberg received her BS degree in chemistry from Moscow State University, and PhD degree in structural biology from the Weizmann Institute of Science. After spending nearly a decade at Bell Labs, she joined Harvard University, where she is the Amy Smith Berylson Professor of Materials Science, Professor of Chemistry and Chemical Biology, Director of the Kavli Institute for Bionano Science and Technology, and Platform Leader in the Wyss Institute for Biologically Inspired Engineering. She pursues multidisciplinary research that includes biomimetics, crystal engineering, and smart materials.

Aizenberg is an elected member of the American Academy of Arts & Sciences, American Philosophical Society, and American Association for the Advancement of Science; she is a Fellow of the American Physical Society, MRS, and an external member of the Max Planck Society. In 2015, she received the Ledlie Prize for the most valuable contribution to science made by a Harvard scientist. She has served on the MRS Board of Directors and on the Board of Physics and Astronomy of the National Academies.

In her presentation, she will discuss how liquids entrapped within and on a solid begin to exhibit unique behaviors, often providing the surrounding material with unprecedented properties. Recently, she introduced a new technology to create self-healing, antifouling coatings (so-called slippery, lubricant-infused porous surfaces [SLIPS]), which has given rise to a fast-developing area of materials research. These bioinspired coatings mimic slippery surfaces of a pitcher plant and outperform state-of-the-art materials in their ability to resist ice and microbial adhesion, repel various simple and complex liquids, prevent marine fouling, or reduce drag. Generalized design principles for creating stable, shear-tolerant SLIPS on glass, ceramics, polymers, fabrics, and metals, as well as their performance in condensers, heat exchangers, membranes, and medical devices will be discussed.

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