

New startup will develop non-stick surfaces for broad range of industrial applications

October 29 2014

The Wyss Institute for Biologically Inspired Engineering at Harvard University today announced that its 'SLIPS' technology, a novel coating that repels almost every type of liquid and solid, will be commercialized by a newly formed private company, SLIPS Technologies, Inc. The company will provide solutions to multiple industries by creating customized, highly–repellent slippery surfaces for a broad range of applications. The announcement follows a worldwide license agreement between Harvard's Office of Technology Development (OTD) and SLIPS Technologies relating to the use of the Institute's Slippery Liquid-Infused Porous Surfaces (SLIPS) platform for non-medical applications.

"This is yet another big win this year towards achieving the Institute's mission of translating breakthrough technologies from the benchtop to the marketplace," said Wyss Institute Founding Director Don Ingber, M.D., Ph.D.

SLIPS was pioneered by Joanna Aizenberg, Ph.D., a Wyss Institute Core Faculty Member and the Amy Smith Berylson Professor of Materials Science at Harvard University's School of Engineering and Applied Sciences (SEAS). The <u>technology</u> creates exceptionally repellent and robust self–cleaning surfaces on metals, plastics, optics, textiles and ceramics. These slippery surfaces repel almost any fouling challenge a surface may face—whether from bacteria, ice, water, oil, dust, barnacles, or other contaminants.

"We introduced and developed a novel systems-based approach," said



Aizenberg, who co-invented the technology with Tak-Sing Wong, Ph.D., former postdoctoral fellow at the Wyss Institute and SEAS, and currently an Assistant Professor in the Department of Mechanical and Nuclear Engineering at the Pennsylvania State University and Philseok Kim, Ph.D., a Senior Research Scientist at the Wyss Institute, and former postdoctoral fellow at the Wyss Institute and SEAS. "By immobilizing a liquid layer on top of any surface and by customizing the design for the specific physical, chemical and environmental conditions of each application, we can effectively create exceptional hybrid materials that deliver almost perfect slipperiness and anti-fouling performance," added Aizenberg. Aizenberg co-founded the new company and will chair the company's Scientific Advisory Board.

Since their first demonstration of the SLIPS technology at Nanotech's Innovation Forum in Boston in June 2011 and their publication that same year in Nature, and with grant support from the Advanced Research Projects Agency–Energy (ARPA–E), Air Force Office of Scientific Research (AFOSR), and the Office of Naval Research (ONR), Aizenberg and her SLIPS team have leveraged the Institute's technology translation capabilities and industrial partnerships to technically advance SLIPS and commercially de–risk it by developing applications in various fields. "We have developed a whole gamut of diverse, innovative approaches to various types and classes of slippery surfaces, and created a broad intellectual property portfolio that will allow customizing our anti–fouling surfaces to various consumer needs", said Aizenberg.

The new company will accelerate and further expand the technology and commercial development efforts initiated at the Institute. Philseok Kim, also a co–founder of the new company, will join SLIPS Technologies, Inc. as Vice President of Technology. Daniel Behr, an experienced entrepreneur and former Director of Business Development at the Harvard OTD, has joined the company as CEO.



"SLIPS is another example of the power of the Wyss Institute model. It combines an unparalleled environment for inventive activity with a commitment to move new discoveries into the marketplace for the benefit of society," said Alan M. Garber, Provost of Harvard University and Chair of the Institute's Board of Directors.

Provided by Harvard University

Citation: New startup will develop non-stick surfaces for broad range of industrial applications (2014, October 29) retrieved 28 April 2024 from <u>https://phys.org/news/2014-10-startup-non-stick-surfaces-broad-range.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.