

THE SALZBERG CHEMISTRY SEMINAR SERIES



The City College
of New York



DEPARTMENT OF CHEMISTRY AND
BIOCHEMISTRY – Fall '22

Monday, November 28, 2022 @ 12:00 noon – MR1027

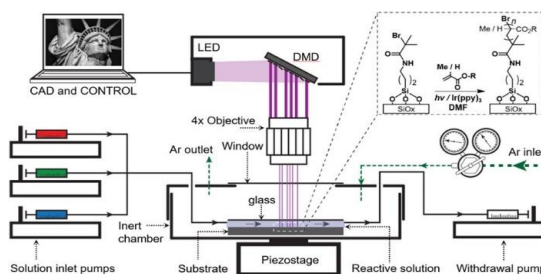
Hypersurface photolithography: Nanoscale control over organic interfaces for biomedical and materials applications

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Abstract: Hypersurface Photolithography (HP) is a printing method for fabricating structures and patterns composed of soft, organic materials bound to solid surfaces and with ~1 micrometer resolution in the x, y, and z dimensions. This platform leverages benign, low intensity light to perform photochemical surface reactions with spatial and temporal control of irradiation, and, as a result, is particularly useful for patterning delicate organic and biological material. By combining novel printing tools with surface-initiated controlled radical polymerizations, we create arbitrary polymer and block-copolymer brush patterns. This lecture will review advances in instrumentation architectures and surface-initiated organic chemistry and polymer chemistry that have made these hypersurfaces possible. Over the course of this discussion, we describe specific applications that have benefited from HP, including new ultrasensitive, multiplexed biosensor architectures for studying carbohydrate binding and stimuli-responsive surfaces.



Biography: Adam Braunschweig is a professor in the Nanoscience Initiative at the Advanced Science Research Center of the City University of New York and in the Department of Chemistry at Hunter College. His group investigates nanolithography of soft matter, photophysics of supramolecular systems, synthetic carbohydrate receptors, and the structure and properties of natural and synthetic mucins.

Join Meeting in-person at MR-1027 or on Zoom at:

<https://ccny.zoom.us/meeting/register/tZYuf-2orDorG9EdR3m8V2yHJsoO9O4cusPY>