

THE
CATHOLIC UNIVERSITY
of AMERICA



Department of Physics
Colloquium

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The Catholic University of America

**Spatiotemporal Biofabrication in Microfluidics
for Constructing Synthetic Ecosystems**

Biofabrication uses biological materials and mechanisms for the fabrication of components, devices and systems of biological relevance. Biofabrication integrates the capability of microfabrication with the diversity and specificity of biology, fostering novel platforms and new processes for biomedical research and novel drug discovery. This lecture will survey two categories of biofabrication in microfluidic networks, electrical addressing and flow assembly, that are spatially and temporally programmable, mild and reversible. The focus will be placed on the facile flow assembly of freestanding biopolymer membranes that are mechanically robust and chemically semi-permeable. The biopolymer membranes are used as innovative “fluitrodes” for the construction of synthetic ecosystems consist of multiple localized cell populations within diffusion distance that represent microbiome system in human in controlled microenvironment.

Wednesday, January 17, 2018

4:00pm

108 Hannan Hall

Refreshments will be served at 3:45

Sponsored in part by the Graduate Student Association

For more information or if you would like to request disability accommodations, please contact:

Adrienne Black (202)319-5315