Donnelly Centre
for Cellular + Biomolecular Research
UNIVERSITY OF TORONTO

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Donnelly Seminar Series

"Laser cell nanosurgery and diagnostics using plasmonic nanoparticles"

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Abstract:

Plasmonics nanoparticles like gold, silver or their alloys are interesting nanomaterials for their applications in nanomedicine. In this talk I will present recent developments in this field performed at Polytechnique. A new method to deliver exogeneous biomolecules into targeted cells using a laser and plasmonic nanoparticles will be presented. The laser nanosurgery technique was employed to perform gene transfection in living cells, neuron stimulation and in vivo biomolecule delivery for ophthalmology applications. Alloy nanoparticles were synthesized and used to perform multiplex 3D imaging of cells and tissues. Our techniques show promises as innovative tools for fundamental research in biology and medicine as well as efficient alternative technologies that could be adapted to therapeutic and diagnostics tools in the clinic.

Thursday, December 7, 2017 | 11:00 am

Donnelly Centre James D. Friesen | Cecil C. Yip Red Seminar Room

Host: Warren Chan, PhD