



## Global COE Program

# “Center of Excellence for Advanced Structural and Functional Materials Design”

## Global Seminar

### Nanofabrication and Nanodevices

- Progress of nanofabrication and nanojoining - Dawn of nanoelectronics
- Low temperature nanosolder for packaging of power chips and flexible electronics

### Speaker: **Dr. Anming Hu**

Department of Mechanical and Mechatronics  
University of Waterloo, Canada

### Date: **July 8 (Wed) 10:00 - 12:10 @ Meeting Room A (R2-231)**

In this serial seminar I will first introduce widely used spectroscopic and advanced microstructure characterization methods for nanomaterial research. I will talk about UV/NIR, Raman, Fluorescence spectroscopy, micro-beam XRD, and field-emission SEM. I will review our research progresses on nanofabrication with fs laser pulses, hydrothermal/solvothermal growth and nanojoining through highlighting several prototyping nanodevices: surface enhanced Raman spectroscopy, TiO<sub>2</sub> nanowire membranes, ZnO nano-optical fibres and CNT filaments for lamps. In the last part I will present the research and development of innovative low melt point solders with Ag nanoparticles for the application of power chips and flexible electronics.