MICRODEVICES: OCEAN OF OPPORTUNITIES FOR INTER-DISCIPLINARY RESEARCH

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MICRO/NANO TECHNOLOGY CENTER BUILDING 12

MNTC

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MEXT-Supported Program for the Strategic Research Foundation at Private Universities "Developmet of next-generation medical technologies using ultra-thin polymer films"

The concept of miniaturization has potential for applications in process engineering, thermal management, diagnostics, etc. The talk will discuss case studies on the development of microdevices/microfluidic platforms for (i) separation of cells and plasma from blood; (ii) study of kinetics of drug release; (iii) thermal management of energy storage systems and (iv) optimization of enzyme catalyzed reactions. The talk will also through light on a new paradigm of miniaturization in the offing, which would utilize microdevices for accelerating research in key research areas such as health care and energy security.