

The 243rd MANA Special Seminar



Nanostructured BiFeO₃ and its Electrical, Magnetic and Optical Behaviors Chair: Dr. Yoshio Bando (MANA COO)

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Multiferroics have been intensively investigated recently, motivated by the large magnetoelectric effect, potential applications in information storage process, spintronics and multiple-state memories. BiFeO₃-based thin films have been prepared by a simple spin-coating process, and observed the tunable ferroelectric and ferromagnetic behaviours. We also designed a simple MIS structure based on BFO thin films, which show good electrical properties. Nanostructured BiFeO₃ particles and nanowires were also synthesized by a controlled hydrothermal process and an electrospun process. The BiFeO₃ nanowires show better photocatalytic property under visible-light irradiation and weak ferromagnetic property at room temperature. Our results indicate that these nanostructured BiFeO₃ are an important visible-light responsive photocatalyst besides its multiferroic performance due to its suitable band gap and excellent chemical stability.

Venue: Seminar Room #431, 4F, MANA Bldg.,

Date: January 17th, Tuesday Time: 15:30-16:15

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