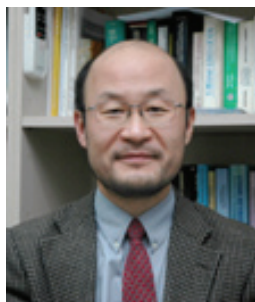


Speaker Profile



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Byungwoo Park Professor

► Education

- Harvard University: Ph.D. in Applied Physics (with Prof. Frans Spaepen, 1989)
- Pennsylvania State University: M.S. in Physics (with Prof. Daniel Frankl, 1984)
- Seoul National University: B.S. in Physics (1981)

► Career

- Seoul National University, Department of Materials Science and Engineering, Professor (1997-present)
- Georgia Institute of Technology, School of Materials Science and Engineering, Assistant Professor (1992-1997)
- California Institute of Technology, Department of Applied Physics, Research Fellow (with Prof. Harry Atwater, 1991-1992)
- IBM T. J. Watson Research Center, Physical Sciences Department, Post Doctor (with Dr. Brian Stephenson, 1989-1991)

► Research Interests

Prof. Park's research is focused on the in-depth investigations of desired electromaterial properties with controlled nanostructures. The goal is to synthesize high-performance and high-stability novel materials for the advanced electronic and energy technology. Current topics include the development of novel oxide materials with nanoscale coating, thin-film electrodes with nanophase control, photoluminescence of nanomaterials, and the growth kinetics of nanostructures. We aim to identify the mechanisms of nanostructures on various physical and chemical properties.

► Selected Publications

- D. Son, D.-R. Jung, J. Kim, T. Moon, C. Kim, and B. Park, "Synthesis and Photoluminescence of Mn-Doped Zinc Sulfide Nanoparticles," *Appl. Phys. Lett.* **90**, 101910 (2007).
- T. Moon, S.-T. Hwang, D.-R. Jung, D. Son, C. Kim, J. Kim, M. Kang, and B. Park, "Hydroxyl-Quenching Effects on the Photoluminescence Properties of SnO₂:Eu³⁺ Nanoparticles," *J. Phys. Chem. C* **111**, 4164 (2007).
- B. Lee, C. Kim, Y. Park, T.-G. Kim, and B. Park, "Nanostructured Platinum/Iron-Phosphate Thin-Film Electrodes for Methanol Oxidation," *Electrochem. Solid-State Lett.* **9**, E27 (2006).
- B. Lee, T. Moon, T.-G. Kim, D.-K. Choi, and B. Park, "Dielectric Relaxation of Atomic-Layer-Deposited HfO₂ Thin Films from 1 kHz to 5 GHz," *Appl. Phys. Lett.* **87**, 012901 (2005).
- C. Kim, M. Noh, M. Choi, J. Cho, and B. Park, "Critical Size of a Nano SnO₂ Electrode for Li-Secondary Battery," *Chem. Mater.* **17**, 3297 (2005).
- T. Moon, B. Lee, T.-G. Kim, J. Oh, Y.-W. Noh, S. Nam, and B. Park, "Microwave Dielectric Relaxation of the Polycrystalline (Ba,Sr)TiO₃ Thin Films," *Appl. Phys. Lett.* **86**, 182904 (2005).
- E. Kim, D. Son, T.-G. Kim, J. Cho, B. Park, K.-S. Ryu, and S.-H. Chang, "A Mesoporous/Crystalline Composite Material Containing Tin Phosphate for Use as the Anode in Lithium-Ion Batteries," *Angew. Chem. Int. Ed.* **43**, 5987 (2004).
- J. Cho, Y.-W. Kim, B. Kim, J.-G. Lee, and B. Park, "A Breakthrough in the Safety of Lithium Secondary Batteries by Coating the Cathode Material with AlPO₄ Nanoparticles," *Angew. Chem. Int. Ed.* **42**, 1618 (2003).
- Y.-J. Kim, H. Kim, B. Kim, D. Ahn, J.-G. Lee, T.-J. Kim, D. Son, J. Cho, Y.-W. Kim, and B. Park, "Electrochemical Stability of Thin-Film LiCoO₂ Cathodes by Aluminum-Oxide Coating," *Chem. Mater.* **15**, 1505 (2003).
- J. Cho, Y.-J. Kim, T.-J. Kim, and B. Park, "Zero-Strain Intercalation Cathode for Rechargeable Li-Ion Cell," *Angew. Chem. Int. Ed.* **40**, 3367 (2001).