

Speaker Profile



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Dr. Chang Yeol Ryu

Assistant Professor

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Dr. Ryu is an assistant professor of Chemistry and a member of both RPI Polymer Center and RPI-UIUC-LAL NSF Nanoscale Science and Engineering Center (NSEC) at Rensselaer Polytechnic Institute, Troy, NY.

Dr. Ryu received his B.S. and M.S. in Chemical Technology from the Seoul National University in 1990 and 1992, respectively, and Ph.D. in Chemical Engineering from the University of Minnesota in 1998. Following a postdoctoral in the Materials Research Laboratory at the University of California at Santa Barbara, he joined the faculty at RPI in 2000. His fields of research include carbon nanotube functionalization (NSEC-supported work), supramolecular block copolymers, polymer separation and analysis using HPLC, and morphology-charge mobility-correlation study of organic semiconducting materials for large-area flexible display applications.

Recent Publications

"Single-step In-situ Synthesis of Polymer-Grafted Single Wall Nanotube Composites" Viswanathan, G.; Chakrapani, N.; Yang, H.; Wei, B.Q.; Chung, H.; Cho, K.; Ryu, C.Y.*; Ajayan, P.M.* *J. Am. Chem. Soc.* **2003**, 125 (31), 9258-9259.

"Density control of single-walled carbon nanotubes using patterned iron nanoparticle catalysts derived from phase-separated thin films of a polyferrocene block copolymer" Lastella, S.; Jung, Y. J.; Yang, H. C.; Vajtai, R.; Ajayan, P. M.*; Ryu, C. Y.*; Rider, D. A.; Manners, I.* *J. Mater. Chem.* **2004**, 14, 1791-1794.

"Supramolecular AB diblock copolymers" Yang, X. W.; Hua, F. J.; Yamato, K.; Ruckenstein, E.; Gong, B*.; Kim, W.; Ryu, C. Y.* *Angew. Chem.-Int. Edit.* **2004**, 43, 6471-6474.

"Interaction-controlled HPLC for block copolymer analysis and separation" Park, S.; Park, I.; Chang, T.*; Ryu, C. Y.* *J. Am. Chem. Soc.* **2004**, 126, 8906-8907.

"Effect of Mesoscale Crystalline Structure on Field-Effect Mobility of Regioregular Poly(3-hexyl thiophene) in Thin Film Transistors" Yang, H.; Shin, T. J.; Yang, L.; Cho, K. W.; Ryu, C. Y.*; Bao, Z.* *Adv. Function. Mat.* **2005**, *in press*.

Dr. Ryu is also actively participating in the educational outreach program of NSEC at RPI. As a coordinator of **"Bringing Nanotechnology to the Classroom"**, in the summers of 2003 and 2004, he advised four high school students and four high school teachers to develop high school teaching modules of nanotechnology using various microscopy techniques. He is recipient of NSF CAREER award (2005) and a co-recipient of Mettler-Toledo Thermal Analysis Educational Grant (2001) and ACS Arthur K. Doolittle Award (1998).

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Center Information

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General information including funding source, annual budget, research area, personnel, etc.

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