

## Speaker Profile

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Dr Myoung-Woon Moon has graduated for BS degree at Department of Metallurgical Science and Engineering, Seoul National University in 1998, and for MS degree at School of Materials Science and Engineering, Seoul National University in 2000. He has earned Ph. D. degree at School of Materials Science and Engineering, Seoul National University in Aug. 2004. He has spent two years in DEAS (now SEAS) at Harvard University working for Prof John W. Hutchinson as a Post Doc. fellow, Currently he is a Senior Research Scientist in the Future Fusion Tech. Lab. at KIST since Apr. 2007.

Myoung-Woon Moon has been interested in thin film mechanics related thin film materials and structures. Two categories of on going research interest are efforts to analyze the thin film failure known as buckling based mechanics of various film-substrate structures and to fabricate nano-scale patterns on various polymers using surface modification techniques. He also deeply involved in the wrinkle instability arises in the system of stiff skin (metal film) on soft polymeric substrate induced by external or intrinsic stress or strain. Recently he focused on the bio-application of nano-structured polymers created using ion beam and plasma technologies.

**Selected publications**

- 1. An experimental study of the influence of imperfections on the buckling of compressed thin films.** M.-W. Moon, J.-W. Chung, K.-R. Lee, K. H. Oh, R. Wang, And A. G. Evans , Acta Materialia, 50(5) (2002) 1219-1227.
- 2. The characterization of telephone cord buckling of compressed thin films on substrates.** M.-W. Moon , H. M. Jensen, J. W. Hutchinson, K. H. Oh, And A. G. Evans, Journal of the Mechanics and Physics of Solids, 50 (2002), 2355-2377.
- 3. Wrinkled Hard Skin on Polymer Substrates Induced by Focused Ion Beam Irradiation** M.-W. Moon, S. H. Lee, J.-Y. Sun, K. H. Oh, A. Vaziri, J. W. Hutchinson, PNAS vol 104 (2007), pp1130-1133.
- 4. Non-lithographic Wrinkle Nanochannels for Protein Precondensation.** S. Chung, J. H. Lee, M.-W. Moon, J. Han, R. D. Kamm, Advanced Materials (Accepted,2008. 02).
- 5. Indium Nanowires Synthesized at Ultra-Fast Rate.** S. S. Oh, D. H. Kim, M.-W. Moon, A. Vaziri, M. Kim, E Yoon, K. H. Oh, and J. W. Hutchinson, Advanced Materials 20 (2008) 1093.