



Dr. Myoung-Woon Moon

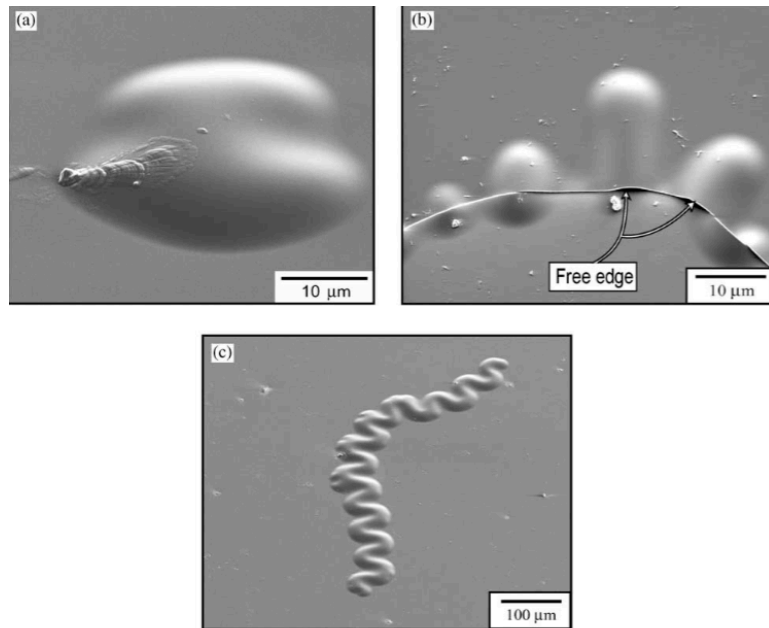


Fig. 1. Illustrations of straight-sided, circular, and telephone cord buckles (Moon et al., 2002).

From: M.-W. Moon , H. M. Jensen, J. W. Hutchinson, K. H. Oh, And A. G. Evans, "The characterization of telephone cord buckling of compressed thin films on substrates", *Journal of the Mechanics and Physics of Solids*, 50 (2002), 2355-2377.

See:

<http://imcm.kist.re.kr/?q=profile/myoung-woon-moon>

http://www.researchgate.net/profile/Myoung-Woon_Moon

<https://scholar.google.com/citations?user=hOM0OmEAAA&hl=en>

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<http://prabook.org/web/person-view.html?profileId=545137>

<http://www.researcherid.com/ProfileView.action?returnCode=ROUTER.Unauthorized&queryString=KG0UuZjN5Wm%252FNyqq8U5BUnfriPJ9%252B38MDMNo0nnOTHw%253D&SrcApp=CR&Init=Yes>

Principal Research Scientist
Materials and Life Science
Korea Institute of Science and Technology (KIST)

Biography:

Detailed education and career 1994. 3 ~ 1998. 2 : Department of Metallurgical Science and Engineering Seoul National University (B. S.) 1998. 3 ~ 2000. 2 : School of Materials Science and Engineering Seoul National University (M. S.) 2000. 3 ~ 2004. 8 : School of Materials Science and Engineering Seoul National University, Seoul, KOREA (Ph. D.) 2005. 3 ~ 2007. 3 : DEAS, Harvard University. Post-Doctoral fellow for Prof. John W. Hutchinson. 2007. 4 ~ current : Senior Research Scientist, Korea Institute of Science and Technology. 2007. 9 ~ current : Associate Professor at Korea University of Science and Technology (KUST). Myoung-Woon Moon and his collaborators are interested in thin film mechanics and surface modification on soft and hard substrates. He has deeply involved in the surface instability such as wrinkle, ripple, dot, or other nanostructures, arise in the system of stiff skin (metal film) on soft polymeric substrate induced by external or intrinsic stress or strain.

Currently he and his colleagues are working on the manipulation of porous carbon materials and various polymer surfaces for nano-structure evolution, wettability control, and related surface properties for the applications on energy and environment issues.

Education, Career, Achievement:

Doctor of Philosophy, Seoul National University, South Korea, 2004.

Postdoctoral Harvard University, Cambridge, Massachusetts, 2005—2007.

Senior research scientist Korea Institute of Science & Technology, Seoul, since 2007

Achievements include patents pending for wrinkled hard skin on polymer for United States of America

Selected Publications:

J.-W. Chung, K.-R. Lee, K. H. Oh, R. Wang, And A. G. Evans, M.-W. Moon, “An experimental study of the influence of imperfections on the buckling of compressed thin films”, *Acta Materialia*, 50(5) (2002) 1219-1227.

M.-W. Moon , H. M. Jensen, J. W. Hutchinson, K. H. Oh, And A. G. Evans, “The characterization of telephone cord buckling of compressed thin films on substrates”, *Journal of the Mechanics and Physics of Solids*, 50 (2002), 2355-2377.

M.-W. Moon, S. H. Lee, J.-Y. Sun, K. H. Oh, A. Vaziri, J. W. Hutchinson, “Wrinkled Hard Skin on Polymer Substrates Induced by Focused Ion Beam Irradiation”, *PNAS* vol 104 (2007), pp1130-1133.

S. Chung, J. H. Lee, M.-W. Moon, J. Han, R. D. Kamm, “Non-lithographic Wrinkle Nanochannels for Protein Precondensation”, *Advanced Materials* (Accepted, 2008. 02).

S. S. Oh, D. H. Kim, M.-W. Moon, A. Vaziri, M. Kim, E Yoon, K. H. Oh, and J. W. Hutchinson, “Indium Nanowires Synthesized at Ultra-Fast Rate”, *Advanced Materials* 20 (2008) 1093.

H.-J. Choi, J.-H. Kim, H.-J. Lee, S.-A. Song, H.-J. Lee, J.-H. Han, M.-W. Moon, *Exp. Mech.* 2010, 50, 635

Jeong-Yun Sun, Shuman Zia, Myoung-Woon Moon, Kyu Hwan Oh, Kyung-Suk Kim, “Folding wrinkles of a thin stiff layer on a soft substrate”, *The Royal Society Proceedings A*, February 2012

Myoung-Woon Moon, “Buckling delamination of compressed thin films”, Chapter in *Mechanical Self Assembly*, pp 131-152, November 2012

Myoung-Woon Moon, “Buckling delamination of compressed thin films”, Chapter in *Mechanical Self Assembly*, pp 131-152, November 2012, DOI: 10.1007/978-1-4614-4562-3_7, 2013

Sung-Chul Cha, Eun Kyu Her, Tae-Jun Ko, Seong Jin Kim, Hyunchul Roh, Kwang-Ryeol Lee, Kyu Hwan Oh and Myoung-Woon Moon, “Thermal stability of superhydrophobic, nanostructured surfaces, *Journal of Colloid and Interface Science*, February 2013