

RESUME

Jin Woo Yi

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Education

[Degrees]	[Field]	[Year]	[Institute Conferred]
B.S.	Mechanical Design Engineering	1997	Kyungpook National University
M.S.	Tribology	2003	Kyungpook National University
Ph.D.	Coating Tribology	2008	Kyungpook National University

Dissertation: Tribological Behavior of Diamond-like Carbon Film under Environmental Conditions

Related Experience

KOREA INSTITUTE OF MATERIALS AND MACHINE [July 2001- February 2003]

Assistant Research in Department of Surface Technology

- Evaluating the characteristics of hard thin film
- Enhancing the adhesion strength of thin film with surface modification

KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY [September 2005 – February 2008]

Assistant Research in Future Fusion Technology Laboratory

- Evaluating the characteristics of hard thin film
- Evaluating the tribological behavior of diamond-like carbon film

KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY [March 2008 – March 2009]

Postdoctoral Research Scientist in Future Fusion Technology Laboratory

- Evaluating the deposition methods and characteristics of hard thin film
- Evaluating the tribological behavior of diamond-like carbon film
- Surface modification on polymer materials
- Evaluating the tribological behavior of micro- and nano-structure on Polymer

BROWN UNIVERSITY [March 2009 – Present]

Postdoctoral Research in Division of Engineering

- Evaluating the nano- and micro-pattern replicated from nature.
- Evaluating the nano-tribology of the hard coating
- Evaluating the surface property of hydrophilic or hydrophobic surfaces.

Awards and Citations

2004 Scientific Achievement Award: Poster Session **Korean Society of Tribologist and Lubrication Engineers**

2007 Scientific Achievement Award: Poster Session **Korean Society of Tribologist and Lubrication Engineers**

International Conference

1. Jin Woo Yi, Jong-Kuk Kim, Seock-Sam Kim, "Effect of Humidity on Tribological Behavior of Si-DLC/DLC Multi-layer", ASIATRIB 2002 (2002. 10)
2. Jin Woo Yi, Jong-Kuk Kim, Seock-Sam Kim, "Effects of Metal-Plasma Source Ion Implantation on the Adhesion of DLC film", ICOPS 2003 (2003. 6)
3. Jin Woo Yi, Jong-Kuk Kim, Seock-Sam Kim, "Roles of Metal-Plasma Immersion Ion Implantation on Tribological Properties of DLC film", NORDTRIB 2004 (2004. 6)
4. Jin Woo Yi, Jong-Kuk Kim, Seock-Sam Kim, "Mechanical and Tribological Properties of Si-DLC/DLC Multi-layer in Humid Conditions", ICMDT 2005 (2005. 6)
5. Jin Woo Yi, Se Jun Park, Kwang-Ryeol Lee, Seock-Sam Kim, "Environmental Dependence on Tribological Behavior of Diamond-like Carbon Films with Nano-undulated Surface", ICMCTF 2006 (2006. 5. 4)
6. Jin Woo Yi, Seung-Hwan Lee, Myoung-Woon Moon, Kwang-Ryeol Lee, Jung-Gu Kim, Seock-Sam Kim, "Tribological Behavior of DLC film in Aqueous Environment", ICMCTF 2007 (2007. 4.25)
7. Jin Woo Yi, Se-Jun Park, Myoung-Woon Moon, Kwang-Reyol Lee, Seock-Sam Kim, "Tribological Behavior of DLC film in Aqueous Environment: Hydrogen Dilution Effect" - Submitted on "Surface and Coatings Technology", AEPSE 2007 in Nagasaki (2007.9.27.)
8. Jin Woo Yi, Hae-Ri Kim, Myoung-Woon Moon, Jong-Kuk Kim, Kwang-Reyol Lee, Seock-Sam Kim , "Aging Behavior of the Plasam Treated Si-incorporated Diamond-like Carbon Surface", ICMCTF 2008 in San Diego (2008.4.28.-5.2.)
9. Jin Woo Yi, Myoung-Woon Moon, Jong-Kuk Kim, Kwang-Reyol Lee, Seock-Sam Kim , "Tribological Behavior of Alternating-layered Si-DLC/DLC Films in Humid Conditinos", NDNC 2008 in Taipei, Taiwan (2008.5.26.-5.29.)

International Journal

1. Jin Woo Yi, Jong-Kuk Kim*, Seock-Sam Kim, "Effects of Metal-Plasma Source Ion Implantation on Tribological Properties of a DLC film", *Key Engineering Materials* 270-273 (2004) pp. 1147-1152.
2. Jin Woo Yi, Se Jun Park, Myoung-Woon Moon*, Kwang-Ryeol Lee, Seock-Sam Kim, "Humidity Effect on Friction Behaviors of Nano-undulated Diamond-like Carbon Films", *Diamond Related Materials* 17, (2008) pp. 967-971.
3. Ritwik K. Roy, Heon Woong Choi, Jin Woo Yi, Myoung-Woon Moon*, Kwang-Ryeol Lee, Dong Keun Han, Ji Hoon Shin, Aki Kamijo, Terumitsu Hasebe, "Hemocompatibility of Surface-modified Si-incorporated Diamond-like Carbon Films", *Acta Biomaterialia* 5 (2009) pp. 249-256.
4. Jin Woo Yi*, Jong-Kuk Kim, Myoung-Woon Moon, Kwang-Ryeol Lee, Seock-Sam Kim, Tribological performance of Si-DLC/DLC multi-layered films in humid conditions, *Tribology Letters* 34 (2009) 223-228.
5. Jin Woo Yi, Se Jun Park, Myoung-Woon Moon*, Kwang-Ryeol Lee, Seock-Sam Kim, "Defect Effect on Tribological Behavior of Diamond-like Carbon Films Deposited with Hydrogen Diluted Benzene Gas in Aqueous Environment", *Applied Surface Science* 255 (2009) 7005-7011.

6. Ritwik K. Roy, Sk. Faruque Ahmed, Jin Woo Yi, Myoung-Woon Moon*, Kwang-Ryeol Lee, Youngha Jun, "Improvement of Adhesion of DLC Coating on Nitinol Substrate by Hybrid Ion Beam Deposition Technique", *Vacuum* 83 (2009) 1179–1183.
7. N. D. Nam, S. H. Lee, J. G. Kim, J. W. Yi, K. R. Lee, Effect of stress on the passivation of Si-DLC coating as stent materials in simulated body environment, *In press in Diamond and Related Materials* (2009.03.09).
8. Sk. Faruque Ahmed, Jin Woo Yi, Myoung-Woon Moon*, Yong-Jun Jang, Bong-Hyun Park, Seong-Hoon Lee, Kwang-Ryeol Lee, The morphology and mechanical properties of PC/ABS modified by Ar ion beam irradiation, *Accepted in Plasma Processes and Polymers* (2009.07).