



Bokyung Kong

bokyungkong@corning.com

+82-10-9810-5855

Education

- Mar. 2006 – Feb. 2010 **Ph. D. Department of Chemistry**
Korea Advanced Institute of Science and Technology (KAIST)
- Advisor: Professor Insung S. Choi (cisgroup.kaist.ac.kr)
 - Thesis: I. pH-Dependent Stability of Self-Assembled Monolayers on Gold
II. Formation of Surface-Tethered Polymer Brushes for Their Chemical and Biological Applications
- Mar. 2004 – Feb. 2006 **M.S. Department of Chemistry**
Korea Advanced Institute of Science and Technology (KAIST)
- Advisor: Professor Insung S. Choi
 - Thesis: Formation of Stimuli-Responsive Surfaces by Surface-Initiated Polymerization.
- Mar. 1999 – Feb. 2003 **B.S. Department of Chemistry**
Sogang University
- Graduated with honors (Cum Laude)

Work Experience

- Dec 2014 – Present **Research Scientist**
Corning Technology Center Korea
- Nov. 2023 – Present**
Electro-optic glass substrate for next phase CPO (project leader)
- Development of glass structure formation, metallization, and lithography for semiconductor application
- Jan. 2018 – Oct. 2023**
OLED lighting for automotive OLED taillight (project leader)
- Development of ultra-thin glass process for bendable automotive taillight
 - Customer qualification and mass production process setup
- Nov. 2014 – Dec. 2017**
OLED lighting for general OLED lighting

- Development of ultra-thin glass process for bendable OLED lighting
- Launched bendable OLED lighting product (LumiCurve Wave®) under the collaboration with panel making customer (OLEDWorks) with Willow and carrier substrate developed

April 2011 – Mar. 2014

Research Scientist
Samsung Corning Precision Materials (SCPM)

Jan 2013 – Mar 2014

Forming & finishing technology lab

- Development of Willow and carrier substrate as an ultra-thin glass handling process for display application

April 2011 – Dec 2012

Analysis Group (Defect analysis part leader)

- Organic glass surface protection method development for anti-scratch
- Development of enhanced glass surface cleaning process

Feb. 2010 – Mar. 2011

Post-Doctoral Researcher
Graduate School of Nanoscience and Technology, KAIST

- Research interests: Drug delivery systems, synthesis of silica nanotubes

Sep. 2007 – Dec. 2009

Lecturer
Department of Chemistry, Hannam University

- Subjects: General chemistry, organic chemistry, polymer chemistry, education of physical chemistry.

Publications

1. Formation of thermoresponsive surfaces by surface-initiated, aqueous atom-transfer radical polymerization of *N*-Isopropylacrylamide: Application to Cell Culture. Kim, D. J.; **Kong, B.**; Jung, Y. H.; Kim, K. S.; Kim, W.-J.; Lee, K.-B.; Kang, S. M.; Jeon, S. J.; Choi, I. S. *Bull. Korean Chem. Soc.* **2004**, 25(11), 1629-1630.
2. Formation of Thermoresponsive Gold Nanoparticle/PNIPAAm Hybrids by Surface-Initiated, Atom Transfer Radical Polymerization in Aqueous Media. Kim, D. J.; Kang, S. M.; **Kong, B.**; Kim, W.-J.; Paik, H.-j.; Choi, H.; Choi, I. S. *Macromol. Chem. Phys.* **2005**, 206(19), 1941-1946.
3. Mechanically-Induced Generation of Counterions Inside Surface-Grafted Charged Macromolecular Films: Towards Enhanced Mechanotransduction in Artificial Systems. Azzaroni, O.; Trappmann, B.; van Rijn, P.; Zhou, F.; **Kong, B.**; Huck, W. T. S. *Angew. Chem. Int. Ed.* **2006**, 45, 7440-7443.
4. Surface-Initiated, Ring-Opening Metathesis Polymerization: Formation of Diblock Copolymer Brushes and Solvent-Dependent Morphological Changes. **Kong, B.**; Lee, J. K.; Choi, I. S. *Langmuir* **2007**, 23(10), 6761-6765.
5. Highly Efficient Non-Biofouling Coating of Zwitterionic Polymers: Poly((3-(Methacryloylamino)propyl)-Dimethyl(3-sulfopropyl)ammonium Hydroxide). Cho, W. K.; **Kong, B.**; Choi, I. S. *Langmuir* **2007**, 23(10), 5678-5682.

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6. Polymeric Ruler: Distance-Dependent Emission Behaviors of Fluorophores on Flat Gold Surfaces and a Bioassay Platform using Plasmonic Fluorescence Enhancement. Chi, Y. S.; Byon, H. R.; Lee, B. S.; **Kong, B.**; Choi, H. C.; Choi, I. S. *Adv. Funct. Mater.* **2008**, *18*(21), 3395-3402.
 7. pH-Dependent Stability of Self-Assembled Monolayers on Gold. **Kong, B.**; Kim, Y.; Choi, I. S. *Bull. Korean Chem. Soc.* **2008**, *29*(9), 1843-1846.
 8. The Control of Cell Adhesion and Detachment on Thin Films of Thermoresponsive Poly[(*N*-isopropylacrylamide)-*r*-((3-(methacryloylamino)propyl)-dimethyl(3-sulfopropyl)ammonium hydroxide)]. **Kong, B.**; Choi, J. S.; Jeon, S.; Choi, I. S. *Biomaterials* **2009**, *30*, 5514-5522.
 9. Aryl Azide-Based Photografting of β -Cyclodextrin onto Cellulose Diacetate Fibers. Park, J. Y.; **Kong, B.**; Chi, Y. S.; Kim, Y.-G.; Choi, I. S. *Bull. Korean Chem. Soc.* **2009**, *30*, 1851-1854.
 10. Biomimetic Encapsulation of Individual Cells with Silica. Yang, S. H.; Lee, K.-B.; **Kong, B.**; Kim, J.-H.; Kim, H.-S.; Choi, I. S. *Angew. Chem. Int. Ed.* **2009**, *48*, 9160-9163.
 11. Osteoconductive Conjugation of Bone Morphogenetic Protein-2 onto Titanium/Titanium Oxide Surfaces Coated with Non-Biofouling Poly(Poly(ethylene glycol) Methacrylate). **Kong, B.**; Kang, S. M.; Oh, E.; Choi, J. S.; Choi, I. S. *Colloid Surf. B* **2010**, *75*, 385-389.
 12. Long-term stability of cell micropatterns on poly((3-(methacryloylamino)propyl)-dimethyl(3-sulfopropyl)ammonium hydroxide)-patterned silicon oxide surfaces. Cho, W. K.*; **Kong, B.***; Park, H. J.; Kim, J.; K. Chegal, W.; Choi, J. S.; Choi, I. S. *Biomaterials* **2010**, *31*(36), 9565-9574. (*as co-first author)).
 13. Water-Collecting Capability of Radial Wettability-Gradient Surfaces Generated by Controlled Surface Reactions. Hong, D.; Cho, W. K.; **Kong, B.**; Choi, I. S. *Langmuir* **2010**, *26*(19), 15080-15083.
 14. Aryl Azide-Based, Photochemical Patterning of Cyclic Olefin Copolymer Surfaces with Non-Biofouling Poly[(3-(methacryloylamino)propyl)dimethyl(3-sulfopropyl)ammonium hydroxide]. Kim, J.; Hong, D.; Jeong, S.; **Kong, B.**; Kang, S. M.; Kim, Y.-G.; Choi, I. S. *Chem. Asian. J.* **2011**, *6*(2), 363-366.
 15. Polycondensation of Sebacic Acid with Primary and Secondary Hydroxyl Groups Containing Diols Catalyzed by *Candida antarctica* Lipase B. Yoon, K.-R.; Hong, S.-P.; **Kong, B.**; Choi, I. S. *Synth. Commun.* **2012**, *42*(23), 3504-3512.
 16. Synthesis of PAMAM Dendrimer Derivatives with Enhanced Buffering Capacity and Remarkable Gene Transfection Efficiency. Yu, G. S.; Bae, Y. M.; Choi, H.; **Kong, B.**; Choi, I. S.; Choi, J. S. *Bioconjugate Chem.* **2011**, *22*(6), 1046-1055.
 17. Experimental considerations on the cytotoxicity of nanoparticles. **Kong, B.**; Seog, J. H.; Graham, L. M.; Lee, S. B. *Nanomedicine* **2012**, *6*(5), 929-941.