

## Hee-Tae Jung

### Curriculum Vitae

Organic Opto-Electronic Materials Lab., Dept. of Chemical & Biomolecular Engineering,  
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#### ***Principal Research Interests:***

- Molecular Self-Assembly
- Soft-building blocks
- Advanced Lithography
- Organic Opto-electronic Devices: Display, Energy Devices & Sensor
- Carbon Nanostructures

#### ***Education:***

- BS in Chemical Engineering, Yonsei Univ., Korea (1987)
- MS in Chemical & Biomolecular Engineering, KAIST, Korea (1989)
- Ph.D in Macromolecular Sci. & Eng., Case Western Reserve Univ., USA (1998)  
(Thesis Advisor: Steven D. Hudson)

#### ***Professional Positions:***

- 1989-1994: Senior Research Scientist, Material & Devices Research Center, Samsung  
Advanced Institute of Technology
- 1998-2000: Postdoctoral Research Fellow, University of California at Santa Barbara,  
Chemical Engineering & Materials (USA); Advisor: Joseph A. Zasadzinski
- 2000-present: Assistant, Associate, Full Professor, Dept. of Chemical & Biomolecular  
Engineering, KAIST
- 2003-2005: Invited Professor, Laboratory of Integrative Biotechnology,  
Korea Research Institute of Bioscience & Biotechnology
- 2007-present: Adjunct Professor, Dept. of Chemistry, KAIST
- 2007-present: Adjunct Professor, KAIST Institute for Nanocentury
- 2009-2010: Visiting Professor, Electronic Materials Group, Polymer Division,  
National Institute of Standard & Technology (USA)
- 2011-present: KAIST Chair Professor
- 2015-present: Director, KAIST Institute for Nano-century

#### ***Other Positions Held Concurrently:***

- 2003-present: National Nano-Fab Center Committee Member (MOST)
- 2003-2011: Journal of Industrial Engineering Chemistry, Editorial Board
- 2004: Journal of Industrial Engineering Chemistry, Special Edition "Nanotechnology", Guest Editor
- 2006: KAIST NanoForum Program Faculty
- 2006-present: Polymer for Electronic Application Program Faculty (CEPP)
- 2006-present: Semiconductor Education Program Faculty (CEPP)
- 2007-2010: Macromolecular Research, Editorial Board

2007-present: NPG Asian Materials (Nature Publishing Group), Editorial Board  
2007-present: Group Leader, Multi-functional Nano-materials, KI for Nanocentury  
2007-present: Director, NRL for Organic Opto-electronic Lab. (KOSEF)  
2008-2011: Advisory Board, Nice Science (KJChE)  
2008-2009: "Nanomaterials Education" Program Organizer (The Industrial Property Office)  
2008-2009: "Polymeric Materials" Program Organizer (The Industrial Property Office)  
2008-present: Patent Award Judge Committee Member (The Industrial Property Office)  
2008-present: KAIST-KCC corp. Technical Program Faculty  
2008-present: Director, WCU program for Nanostructure based Biosensing Devices  
2009-2011: Director, General Affairs, ChungNam Division (Polymer Society of Korea)  
2009-present: Polymer Division Program Faculty (KICChE)  
2010-present: Display Education Program Faculty (KAIST)  
2010-present: LG Innotech Program Faculty (KAIST)  
2011-2012: Faculty Committee Council (KAIST)  
2011-present: Adjunct Professor, Master of Science Journalism (KAIST)  
2011-present: Associate Editor, Macromolecular Research  
2012-present: Advisory Member, National Nanotechnology Committee  
2013-present: Advisory Member, Samsung Future Technology Committee  
2015-present: Vice Head of Polymer Division of KICChE

***Memberships:***

2000-present Korea Institute of Chemical Engineers  
2000-present Polymer Soc. of Korea  
2000-present Korea Society of Industrial & Eng. Chemistry  
2009-present Korea Rheology Society  
2007-present MRS  
2008-present American Institute of Chemical Engineers  
2008-present American Physical Society  
2011-present SPIE-optics  
2010-present International Liquid Crystal Society

***Awards & Honors:***

1993: Patent Map Competition Award (Samsung Electronics)  
1997: Outstanding Research Scientist Award (Advanced Liquid Crystal Materials Center, USA)  
2002: Outstanding Research Scientist (LG YonAm Foundation)  
2004: Excellent Laboratory Advisor (DongA Science)  
2005-2007: The IBC Leading Scientist of World  
2005-2007: Top Scientist (Marquis Who is Who?)  
2008: Top 100 Scientist Award (International Biography)  
2008: 2000 Outstanding scientists Award (International Biography)  
2008 : Science Award of The Year (KAIST)  
2009: Campus Patent Strategy Universiade Outstanding Professor Award (National Academy of Engineering, Korea)  
2010: Korean in PubMed Award (Biology Research Information Center)  
2010: KAIST Technical Renovation Award  
2010 & 2011: Top 10 technology of the year (KAIST)

2011: Leading Research Lab. (NRF)  
2012: Best Scientist of the Month (NRF, Korea)  
2013: KAIST Top10 Research Award of the year (KAIST)

## List of Publications

### Peer Reviewed:

(\* designates corresponding author)

173. "Highly Stable Ultra-Molecular Weight Partially Hydrolyzed Polyacrylamide for Enhanced Oil Recovery" Jinkyu Choi, Duyoun Ka, Taemoon Chung, Jueun Jung, Gunhyo Koo, Taewon Uhm, Sung Hoon Jung, Sounghee Park and Hee-Tae Jung\*, *Macromolecular Research* (2015, Accepted)
172. "Sonification-free dispersion of large-area graphene oxide sheets using internal pressure from release of intercalated carbon dioxide" Dae Woo Kim, Daeok Kim, Byung Hyun Kim, Huen Lee\* and Hee-Tae Jung\*, *Carbon*, 88, 126-132(2015)
171. "Evaluation of highly stable ultrahigh-molecular-weight partially hydrolyzed polyacrylamide for enhanced oil recovery" Choi Jinkyu, Ka Duyoun, Chung Taemoon, Jung Jueun, Koo Gunhyo, Uhm Taewon, Jung Sung Hoon, Park Sounghee, Hee-Tae Jung, *Macromolecular Research*, 23(6), 518-524(2015)
170. "High mass loading, binder-free MXen anodes for high areal capacity Li-ion batteries" Seon Joon Kim, Michael Naguib, Menggiang Zhao, Chuanfang Zhang, Hee-Tae Jung, M. W. Barsoum and Yury Gogotsi\*, *Electrochimica Acta*, 163, 246-251(2015)
169. "A New Triple-Layered Composite for High-Performance Broadband Microwave Absorption" Jaeho Choi, Hee-Tae Jung\*, *Composite Structures*, 122, 166-171(2015)
168. "The Influence of Cu Lattices on the Structure and Electrical Properties of Graphene Domains during Low-pressure Chemical Vapor Deposition" Dae Woo Kim, Seon Joon Kim, Jae Sung Kim, Minju Shin, Gyu-Tae Kim, Hee-Tae Jung\*, *Chemphyschem*, 16(2), 1165-1171(2015)
167. "Controlled Lithium Dendrite Growth by a Synergistic Effect of Multi-layered Graphene Coating and an Electrolyte Additive" Joo-Seong Kim, Dae Woo Kim, Hee-Tae Jung\* and Jang-Wook Choi\* *Chemistry of Materials*, 27(8), 2780-2787(2015)
166. "Complete Magnesiothermic Reduction of Vertically Aligned Mesoporous Silica Channels to form Pure Silicon Nanoparticles" Kyoung Hwan Kim, Dong Jin Lee, Kyeong Min Cho, Seon Joon Kim, Jung-Ki Park and Hee-Tae Jung\*, *Scientific Reports*, 5, (2015)
165. "High Density of Line Pattern by Using De-Wetting During Soft-Lithography" Ji-Sun Lee, Su Kyoung Lee, Jin-Mi Jung, Hee-Tae Jung\*, *Journal of Nanoscience and Nanotechnology*, 15(2), 1452-1455(2015)
164. "Large-Area, Highly Ordered Array of Graphitic Carbon Materials Using Surface Active Chitosan Prepatterns" Youn-Kyoung Baek, Dae woo Kim, Seung-Bo Yang, Jung-Goo Lee, Young Kuk Kim, Hee-Tae Jung\*, *Journal of Nanoscience and Nanotechnology*, 15(2), 1221-1228(2015)
163. "Well-Defined and High Resolution Pt Nanowire Arrays for A Performance Hydrogen by A Surface Scattering Phenomenon" Hae Wook Yoo, Soo-Yeon Cho, Hwan-Jin Jeon, Hee-Tae Jung\*, *Analytical Chemistry*, 87(3), 1480-1484(2015)
162. "Periodic arrays of liquid crystalline torons in microchannels" Yun Ho Kim, Min-Jun Gim, Hee-Tae Jung and Dong Ki Yoon\*, *RSC Advances*, 5(25), 19279-19283(2015)
161. "Direct Observation of Molybdenum Disulfide, MoS<sub>2</sub>, Domains by Using A Liquid Crystalline Texture Method" Dae Woo Kim, Jong Min Ok, Woo-Bin Jung, Jong Seon Kim, Hyung Ouk Choi, Yun Ho Kim, Hee-Tae Jung\*, *Nano Letters*, 15(1), 229-234(2015)

160. "Low-Voltage-Tunable Nanobeam Lasers Immersed in Liquid Crystals" Se Jeong Kim, Hwi-Min Kim, Jaehyun Son, Yun-Ho Kim, Jong Min Ok, Ki Soo Kim, Hee-Tae Jung, Bum-Ki Min, Yong-Hee Lee\*, *Optics Express*, 22(25), 30707-30712(2014)
159. "Bulk Scale Growth of CVD Graphene on Ni Nanowire Foams for A Highly Dense and Elastic 3D Conduction Electrode" Byung Hyun Min, Dae Woo Kim, Kyoung Hwan Kim, Hyung Ouk Choi, Sung Woo Jang, Hee-Tae Jung\*, *Carbon*, 80,446-452(2014)
158. "Solution-Processable Graphene-Silver Nanowire Hybrids as Transparent Conduction Films" Hyung Ouk Choi, Seung-Bo Yang, Byung Hyun Min, Dae Woo Kim, Kyeongmin Cho, Hee-Tae Jung\*, *Science of Advanced Materials*, 6, 2304-2311(2014)
157. "Inhibited Phase Behavior of Gas Hydrates in Graphene Oxide: Influences of Surface and Geometric Constraints" Dae Ok Kim, Dae Woo Kim, Hyung Kyu Lim, Jiwon Jeon, Hyung-Jun Kim, Hee-Tae Jung\*, Huen Lee, *Physical Chemistry Chemical Physics*, 16(41), 22717-22722(2014)
156. "Hierarchical Ordering of Quantum Dots and Liquid with Tunable Super-Periodicity into High Aspect Ratio Moire Superlattice Structure" Soo-Yeon Cho, Hwan-Jin Jeon, Jong Seon Kim, Jong Min Ok, Hee-Tae Jung, *Advanced Functional Materials*, 24(44), 6939-6947(2014)
155. "Highly Enhanced Mechanical Properties of Polypropylene-long Carbon Fiber Composites by A Combined Method of Coupling Agent and Surface Modification of Long Carbon Fiber" Seong Min Cho, Hee-Tae Jung\*, *Macromolecular Research*, 22(10), 1066-1073(2014)
154. "Tunable Volatile Organic Compounds Sensor by Using Thiolated Ligand Conjugation on MoS<sub>2</sub>" Jong Seon Kim, Hae Wook Yoo, Hyung Ouk Choi, Hee-Tae Jung\*, *Nano Letters*, 14(10), 5941-5947(2014)
153. "Combining The Silver Nanowire Bridging Effect with Chemical Doping for Highly Improved Conductivity of CVD-grown Graphene Films" Hyung Ouk Choi, Dae Woo Kim, Seon Joon Kim, Kyeongmin Cho, Hee-Tae Jung\*, *Journal of Materials Chemistry C*, 2(29), 5902-5909(2014)
152. "Role of 1D Metallic Nanowires in Polydomain Graphene for Highly Transparent Conduction Films" Hyung Ouk Choi, Dae woo Kim, Seon Joon Kim, Seung Bo Yang, Hee-Tae Jung\*, *Advanced Materials*, 26(26), 4575(2014)
151. "High-Performance of PEDOT/PSS Free Organic Solar Cells on an Air-Plasma-Treated ITO Substrate" Jong Kil Choi, Ming Liang Jin, Cheng Jin An, Dae Woo Kim, Hee-Tae Jung\*, *ACS Applied Materials & Interfaces*, 6(14), 11047-11053(2014)
150. "Fabrication of Sub-20nm Nano-Gap Structures Through The Elastomeric Nano-Stamp Assisted Secondary Sputtering Phenomenon" Hwan-Jin Jeon, Eun Hyung Lee, Hae-Wook Yoo, Kyoung Hwan Kim, Hee-Tae Jung\*, *Nanoscale*, 6(11), 5953-5959(2014)
149. "10nm Scale Nanopatterning on Flexible Substrates by A Secondary Sputtering Phenomenon and their applications in high performance, Flexible and Transparent Conduction films" SungWoo Jang, Hwan-jin Jeon, Cheng Jin An, Ming Liang Jin, Hee-Tae Jung\*, *Journal of Materials Chemistry C*, 2(18), 3527-3531(2014)
148. "Intercalation of Gas Molecules in Graphene Oxide Inter Layer: The Role of Water" DaeOk Kim, Dae Woo Kim, Hyung-Kyu Lim, Jiwon Jeon, Hyungjun Kim, Huen Lee, Hee-Tae Jung\*, *Journal of Physical Chemistry C*, 118(20), 11142-11148(2014)
147. "Sulfur Infiltrated Mesoporous Graphene-Silica Composite as A Polysulfide Retaining Cathode Material for Lithium-Sulfur Batteries" Kyoung Hwan Kim, Young-Si Jun, Gerbec, Jeffrey A., See, Kimberly A, Stucky, Galen D., Hee-Tae Jung\*, *Carbon*, 69, 543-551(2014)
146. "Highly Efficient Top-Illuminated Flexible Polymer Solar Cells with a Nanopatterned 3D Microresonant Cavity" Cheng Jin An, Changsoon Cho, Jong Kil Choi, Jong-Min Park, Ming Liang Jin, Jung-Yong Lee, Hee-Tae Jung\*, *Small*, 10(7), 1278-1283(2014)

145. “Highly Robust SiCOH/Mesoporous SiO<sub>2</sub> Ultralow Dielectric Films with Heterostructures” Jong-Min Park, Kyoung Hwan Kim, Cheng Jin An, Ming Liang Jin, Jun-Hee Hahn, Byung-Seon Kong, Hee-Tae Jung\*, *RSC Advances*, 4(54), 28409-28416(2014)
144. “Enhanced Thermal Stability of Organic Solar Cells on Nano Structured Electrode by Simple Acid Etching”, Ming Liang Jin, Jong-Kil Choi, Dae-Woo Kim, Jong-Min Park, Cheng Jin An, Hyeongjun Kim, Bumjoon Kim, Ying Diao, Hee-Tae Jung\*, *Organic Electronics*, 15(3), 680-684(2014)
143. “Fabrication of 10 nm-Scale Complex 3D Nanopatterns with Multiple Shapes and Components by Secondary Sputtering Phenomenon” Hwan-Jin Jeon, Hyeon Su Jeong, Yun Ho Kim, Woo-Bin Jung, Jeong Yeon Kim, Hee-Tae Jung\*, *ACS Nano*, 8(2), 1204-1212(2014)
142. “Optical Vortex Arrays form Smectic Liquid Crystals” Baeksik Son, Se Jeong Kim, Yun Ho Kim, Kalantar K., Hwi Min Kim, Hyeon-Su Jeong, Siyoung Q. Choi, Jonghwa Shin, Hee-Tae Jung, Yong-Hee Lee\*, *Optics Express*, 22(4), 4699-4704(2014)
141. “Generation of Monodisperse, Shape-controlled Single and Hybrid Core-Shell nanoparticles via a Simple One-Step Process”, Jong-Seon Kim, Hwan-Jin Jeon, Hae-Wook Yoo, Youn-Kyoung Baek, Kyoung Hwan Kim, Dae Woo Kim and Hee-Tae Jung, *Advanced Functional Materials*, 24(6), 841-847(2014)
140. “Comparison of Blend Morphologies of The Nano-patterned Photoactive Films via Two Different Techniques: Thermal-Assisted and Solvent-Assisted Soft-nanoimprint Lithography”, Jong Kil Choi, Jae Kyu Jin, Ming Liang Jin, Cheng jin An, Hee-Tae Jung\*, *RSC Advances*, 4(24), 12302-12308(2014)
139. “Surface Plasmon Assisted High Performance Top-Illuminated Polymer Solar Cells with Nanostructured Ag Rear Electrodes” Cheng Jin An, Hae-Wook Yoo, Changsoon Cho, Jong-Min Park, Jong Kil Choi, Ming Liang Jin, Jung-Yong Lee, Hee-Tae Jung\*, *Journal of Materials Chemistry*, 2(9), 2915-2921(2014)
138. “Ultraclean Transfer of CVD-Grown Graphene and Its Application to Flexible Organic Photovoltaic Cells” Chengjin An, Seon Joon Kim, Hyung Ouk Choi, Dae Woo Kim, Sung Woo Jang, Mingliang Jin, Jong-Min Park, Jong-Kil Choi, Hee-Tae Jung\*, *Journal of Materials Chemistry A*, 2(48), 20474-20480(2014)
137. “High Quality Reduced Graphene Oxide through Repairing with Multi-Layered Graphene Ball Nanostructures” Kyoung Hwan Kim, Minho Yang, Kyeong Min Cho, Young-Si Jun, Sang Bok Lee, Hee-Tae Jung\*, *Scientific Reports*, 3, 2045-2322(2013)
136. “Three-Dimensional Textures and Defects of Soft Material Layering Revealed by Thermal Sublimation” Dong-ki Yoon, Yun Ho Kim, Dae Seok Kim, Seong Dae Oh, Smalyukh Ivan I., Clark, Noel A., Hee-Tae Jung, *Proceedings of The National Academy of Sciences of The United States of America*, 110(48), 19263-19267(2013)
135. “The Effects of The Crystalline or Lentionation of Cu Domains on The Formation of Nanoripple Arrays in CVD-Grown Graphene on Cu” Dae Woo Kim, Jinsup Lee, Seon Joon Kim, Seok Woo Jeon, Hee-tae Jung, *Journal of Materials Chemistry C*, 1(47), 7819-7824(2013)
134. “Key Growth Parameters Affecting The Domain Structure of Chemical Vapor Deposition (CVD)-Grown Graphene on Nickel” Dae Woo Kim, Seon joon Kim, Hee-tae Jung\*, *RSC Advances*, 3(45), 22909-22913(2013)
133. “Orientation Control of Liquid Crystals using Carbon-Nanotube-Magnetic Particle Hybrid Materials” Hyeon Su Jeong, Sang Cheon Youn, Yun Ho Kim and Hee-Tae Jung\*, *Physical Chemistry Chemical Physics (Advance Article)*, 15(24), 1039 (2013)
132. “Nanoporous SiCOH/CxHy dual phase films with an ultralow dielectric constant and a high Young's modulus” Jong-Min Park, Jong Kil Choi, Cheng Jin An, Ming Liang Jin, Sangwoo Kang, Juyoung Yun, Byung-Seon Kong and Hee-Tae Jung\*, *Journal of Materials Chemistry C*, 1(21), 3414-3420 (2013)

131. "Fabrication of complex 3-dimensional patterned structures on a ~10nm scale from a single master pattern by secondary sputtering lithography" Hwan-Jin Jeon, Hae-Wook Yoo, Eun Hyung Lee, Sung Woo Jang, Jong-Seon Kim, Jong Kil Choi and Hee-Tae Jung\*, *Nanoscale* (2013)
130. "Plasmonic Three-Dimensional Dimpled Array from Highly Ordered Self-Assembled Liquid Crystal Defects" Hae-Wook Yoo, Yun Ho Kim, Jong Min Ok, Hyeon Su Jeong, Jung Hyun Kim, Baek Sik Son and Hee-Tae Jung\*, *Journal of Materials Chemistry C* (2012, Accepted)
129. "Multistep Deposition of Gold Nanoparticles on Single-Walled Carbon Nanotubes for High Performance Transparent Conducting Films" Seung Bo Yang, Byung-Seon Kong, Hee-Tae Jung\*, *The Journal of Physical Chemistry C*, 116, 25581-25587 (2012)
128. "Micro- and nano morphological modification of aluminum surface for adhesive bonding to polymeric composites" Won Seock Kim, Kyoung Hwan Kim, Chang-Jae Jang, Hee-Tae Jung\*, Jung-Ju Lee, *Journal of Adhesion Science and Technology* 27(15), 1625-1640 (2013)
127. "Thermally Responsive Microlens Arrays fabricated with the use of Defects arrays in a Smectic Liquid Crystal", Jung Hyun Kim, Yun Ho Kim, Hyeon Su Jeong, Mohan Srinivasarao, Steve D. Hudson and Hee-Tae Jung\*, *RSC advances*, 2, 6729-6732
126. "Cylindrical Posts of Ag/SiO<sub>2</sub>/Au Multi-segment layer Patterns for Highly Efficient Surface Enhanced Raman Scattering (SERS), Kyoung Hwan Kim, Youn-Kyoung Baek, Hwan-Jin Jeon, Mohan Srinivasarao, and Hee-Tae Jung\*, *Nanotechnology*, 23(31), 315302 (2012)
125. "Bifunctional ITO layer with a high resolution, surface nano-pattern for alignment for alignment and switching of LCs in device applications ", Hyeon Su Jeong, Hwan-Jin Jeon, Yun Ho Kim, Moon Bee Oh, Pankaj Kumar, Shin-Woong Kang and Hee-Tae Jung\*, *NPG Asia Materials*, 4, e7 (2012)
124. "Fabrication of Highly Ordered Multi-segment Line pattern over a Large-area", Jisun Lee,- Su-Kyong Lee, Jin-Mi Jung, Youn-Kyoung Baek and Hee-Tae Jung\*, *RSC Advances*, 2, 2043-2046 (2012)
123. "Immobilization-free Screening of Aptamers assisted by Graphene Oxide", Jee-Woong Park, Rameshwar Tatavarty, Dae Woo Kim, Hee-tae Jung\* and Man Bock Gu, *Chemical Comm.*, 48(15), 2071-2073 (2012)
122. "Direct visualization of large-area graphene domains and boundaries by optical birefringency", Dae Woo Kim, Yun Ho Kim, Hyeon Su Jeong and Hee-Tae Jung\*, *Nature Nanotechnology*, 10.1038/nnano.2011.198 (2011)
121. "Chiral Nematic Fluids as Dynamic Masks for Lithography", Hyeon Su Jeong, Yun Ho Kim, Ji Sun Lee, Jung Hyun Kim, Mohan Srinivasaro\* and Hee-tae Jung, *Advanced Materials*, 24(3), 381-384 (2011)
120. "Surface Plasmon Polariton Raman Microscopy Vibrational Spectroscopy", Hae-Wook Yoo, Lee J. Richter, Hee-Tae Jung and Chris A. Michaels\*, *Vibrational Spectroscopy* (2011)
119. "Highly Ordered Defect Arrays of 8CB (4'-n-octyl-4-cyano-biphenyl) Liquid Crystal via Template-Assisted Self-Assembly" Jung Hyun Kim, Yun Ho Kim, Hyeon Su Jeong, Eun Kyoung Youn and Hee-Tae Jung\*, *Journal of Materials Chemistry*, 21 (45), 18381 - 18385 (2011)
118. "Enzyme Precipitate Coatings of Glucose Oxidase onto Carbon Paper for Biofuel Cell Application" Mike Fischback, Ki Young Kwon, Inseon Lee, Su Jeong Shin, Hyun Gyu Park, Byoung Chan Kim, Yongchai Kwon, Hee-Tae Jung, Jungbae Kim\* and Su Ha, *Biotechnology and Bioengineering*, 109(2), 318-324 (2012)
117. "Patterned Nano-sized Gold Dots within FET Channel: From Fabrication to Alignment of Single Walled Carbon Nanotube Networks" Hwan-Jin Jeon, Youn-Kyoung Baek, Seung

- Bo Yang, Su-Kyong Lee, Jin-Mi Jung and Hee-Tae Jung\*, *Journal of Materials Chemistry*, 21(37), 14285-14290 (2011)
116. "Vertical Alignment of Reduced Graphene Oxide/Fe-oxide Hybrids Using the Magneto-Evaporation Method", Sang Cheon Youn, Dae Woo Kim, Seung Bo Yang, Hye Mi Cho, Jae Hyun Lee and Hee-Tae Jung\*, *Chemical Comm.* 47(18),5211-5213 (2011)
  115. "Effect of the exposure time of hydrazine vapor on the reduction of graphene oxide films" Sang Cheon Youn, Jianxin Geng, Baek Sik Son, Seung Bo Yang, Dae Woo Kim, Hye Mi Cho and Hee-Tae Jung\*, *Journal of Nanoscience & Nanotechnology* (accepted)
  114. "Highly Enhanced Interfacial Adhesion Properties of Steel – Polymer Composites by Dot-Shaped Surface Patterning", Il Han Yun, Won-Seok Kim, Kyoung Hwan Kim, Jin-Mi Jung, Jung-Ju Lee and Hee-Tae Jung\*, *J. Appl. Phys.* 109(7),74302 (2011)
  113. "The Fabrication of highly ordered silver nanodot pattern by platinum assisted nanoimprint lithography" Hae-Wook Yoo, Jin-Mi Jung, Su-kyung Lee and Hee-Tae Jung\*, *Nanotechnology*, 22(9), 095304 (2011)
  112. "Recent Advances in Hybrid of Carbon Nanotube Network Films and Nanomaterials for Their Potential Applications as Transparent Conducting Films", Seung Bo Yang, Byung-Seon Kong, Dae-Hwan Jung, Youn-Kyoung Baek, Chang-Soo Han, Sang-Keun Oh and Hee-Tae Jung\*, *Nanoscale* 3(4), 1361-1373 (2011) (**invited review article**)
  111. "Synthesis and Photovoltaic Performance of Low-Bandgap Polymers Based on 9-9-Dialkyl-3,6-Dialkyloxy-Silafluorene", Jae-kyu Jin, Jong Kil Choi, You Hong, Hyunbum Kang, Sung cheol Yoon, Bumjoon Kim and Hee-Tae Jung\*, *Macromolecules* 44(3), 502-511 (2011)
  110. "Smectic Liquid Crystal Defects for Self-assembling Building Blocks and Their Lithographic Applications", Yun Ho Kim, Dong Ki Yoon, Hyeon Su Jeong, Oled D. Lavrentovich and Hee-Tae Jung\*, *Advanced Functional Materials* 21(4), 610-627 (2011) (**invited review article**)
  109. "Alignment of SWNTs by Protein-Ligand Interaction of Functionalized Magnetic Particles under Low Magnetic Fields" Tae Jung Park, Jong Pil Park, Seok Jae Lee, Dae-Hwan Jung, Young Koan Ko, Hee-Tae Jung and Sang Yup Lee\*, *Journal of Nanoscience and Nano Technology* 11(5), 4540-4545 (2011)
  108. "Label-Free Detection of DNA Hybridization using Pyrene-Functionalized SWNTs: Effect of Chemical Structures of Pyrene Molecules on DNA Sensing Performance", Y.-K. Baek, D.-H. Jung, S.-M. Yoo, S. Shin, J.-H. Kim, H.-J. Jeon, S.Y. Lee and H.-T. Jung\*, *J. Nanoscience & Nanotechnology* 11(5), 4210-4216 (2011)
  107. "Palladium-catalyzed Mizoroki-Heck coupling reactions using sterically bulky phosphite ligand", Eunhye Jung, Kyungho Park, Jaewook Kim, Hee-Tae Jung, Il-Kwon Oh and Sunwoo Lee, *Inorganic Chemistry Communications* 13(11),1329-1331(2010)
  106. "Comparison of The Stability of Surface-Modified SWNTs and DWNTs Network Films" Seung Bo Yang, Byung-Seon Kong, Dae-Woo Kim and Hee-Tae Jung\*, *The Journal of Physical Chemistry C* 114(10), 4394-4398 (2010)
  105. "Evaluation of mechanical interlock effect on adhesion strength of polymer-metal interfaces using micro-patterned surface topography", Won-Seock Kim, Il-Han Yun, Jung-Ju Lee\* and Hee-Tae Jung, *International Journal of Adhesion & Adhesives* 30(6), 408-417 (2010)
  104. "New Top-Down Approach for Fabricating High-Aspect-Ratio Complex Nanostructures with 10 nm Scale Features", Hwan-Jin Jeon, Kyoung Hwan Kim, Youn Kyung Baek, Dae Woo Kim and Hee-Tae Jung\*, *Nano Letters* 10(9), 3604-3610 (2010)
  103. "A Simple Approach for Preparing Transparent Conductive Graphene Films Using the Controlled Chemical Reduction of Exfoliated Graphene Oxide in an Aqueous Suspension", Jianxin Geng, Leijing Liu, Seung Bo Yang, Sang Cheon Yoon, Dae Woo

- Kim, Ji-Sun Lee, Jong Kil Choi and Hee-Tae Jung\*, *The Journal of Physical Chemistry C* 114(34), 14433-14440 (2010)
102. "Nanoscale Enzyme Reactors in Mesoporous Carbon for Improved Performance and Lifetime of Biosensors and Biofuel Cells" Ki Young Kwon, Jongkyu Youn, Jae Hyun Kim, Yongjin Park, Chulmin Jeon, Byoung Chan Kim, Yongchai Kwon, Xueyan Zhao, Ping Wang, Byoung In Sang, Jinwoo Lee, Hyun Gyu Park, Ho Nam Chang, Taeghwan Hyeon, Su Ha, Hee-Tae Jung\* and Jungbae Kim\*, *Biosensors and Bioelectronics* 26(2), 655-660 (2010)
  101. "Large-Scale Highly Ordered Chitosan-Core Au-Shell Nanopatterns with Plasmonic Tunability: A Top-Down Approach to Fabricate Core-Shell Nanostructure", Youn-Kyoung Baek, Seung Min Yoo, Hwan-Jin Jeon, Kyungwhan Kim, Jisun Lee, Sang Yup Lee and Hee-Tae Jung\*, *Advanced Functional Materials*, 20,4273-7278 (2010)
  100. "High-performance biosensors based on enzyme precipitate coating in gold nanoparticle-conjugated single-walled carbon nanotube network films", Ki Young Kwon, Seung Bo Yang, Byung-Seon Kong, Jungbae Kim, Hee-Tae Jung\*, *Carbon* 48(15), 4504-4509 (2010)
  99. "Liquid-crystal periodic zigzags from geometrical and surface-anchoring-induced confinement: Origin and internal structure from mesoscopic scale to molecular level", D.K. Yoon, J.H. Yoon, Y.H. Kim, M.C. Choi, J.H. Kim, O. Sakata, S. Kimura, M.W. Kim, M.H. Ree\* and H.-T. Jung\*, *Physical Review E* 82(4), 041705(2010)
  98. "Fabrication of complex patterns with a wide range of feature sizes from a single line prepattern by successive application of capillary force lithography", S.-K. Lee, J.-M. Jung, J.S. Lee and H.-T. Jung\*, *Langmuir* 26(17), 14359-14363 (2010)
  97. "Preparation of graphene relying on porphyrin exfoliation of graphite", Jianxin Geng, Byung-Seon Kong, Seung Bo Yang and Hee-Tae Jung\*, *Chemical Comm.* 46(28), 5091-5093 (2010)
  96. "Enhanced Diode Characteristics of Organic Solar cells using Titanium Sub-Oxide Electron transport Layer" Jay Hyun Lee, Shinuk Cho, Anshuman Roy, Hee-Tae Jung, and Alan J.Heeger\*, *Applied Physics Letters* 96(16),1663303 (2010)
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