

**LEE Jinyong**  
Professor  
Department of Chemistry



• **Office** 330314, Chemistry Building, Sungkyunkwan University (SKKU) Natural Sciences Campus, 2066 Seobu-ro, Jangan-gu, Suwon, Gyeonggi-do, Republic of Korea  
 • **Phone** +82-31-299-4560  
 • **E-mail** jinylee@skku.edu  
 • **Website** <http://home.skku.edu/~jinylee>  
 • **Social Media**

**Key Words**  
**Research Area**

Computational Chemistry, Theoretical Chemistry, Fluorescence Sensor, Organic Magnetic Molecules  
 Our research interest is focused on "Understanding of molecular functions and designing new molecules". We have applied computational approaches to understand molecular functions observed experimentally in several subjects such as fluorescence sensors, electrochromic materials and CO<sub>2</sub> absorption mechanism, and especially on "2D Materials and Biomolecules". We have studied on organic magnetic materials and developed design strategy to build ferromagnetic magnetic molecules. Also, various materials such as MoS<sub>2</sub>, graphyne, TiO<sub>2</sub> are under research. Our group have also experienced with molecular dynamics simulation which is useful to understand the properties of biomolecules such as enzyme and proteins.

**Education**

- 1997 PhD Pohang University of Science and Technology (POSTECH), Korea
- 1994 MSc POSTECH, Korea
- 1992 BSc POSTECH, Korea (Magna Cum Laude)

**Experience**

- 2006 Dec – 2007 Feb Visiting Professor, University of California at Irvine, USA
- 2005 Sep – Present Professor, Department of Chemistry, Sungkyunkwan University
- 2000 Apr – 2002 Sep Principal Investigator in Center for Biofunctional Molecules, Korea
- 1997 Oct – 1998 Oct Postdoctoral Fellow in University of California Berkely, USA

**Position**

- 2015. 1 – Present Associate Member of the Korean Academy of Science and Technology
- 2016. 1 - Board Member of Asia-Pacific Association of Theoretical and Computational Chemistry

**Selected Publication**

- "Quantum Chemical Approaches for Controlling and Evaluating Intramolecular Magnetic Interaction in Organic Diradicals", Int. J. Quant. Chem. 2016 (in press)
- "Electronic Properties of  $\alpha$ -Graphyne Nanotubes", Carbon, 2015, 84, 246-253
- "A Tetranaphthoimidazolium Receptor as a Fluorescence Chemosensor for Phytate", Chem. Comm. 2014, 50, 5851-5853
- "Tandem Synthesis of Photo-Active Benzodifuran Moieties in the Formation of Microporous Organic Networks", Angew. Chem. Int. Ed. 2013, 52, 6228-6232
- "Scaling Approach for Intramolecular Magnetic Coupling Constants of Organic Diradicals", J. Phys. Chem. A, 2013, 117, 3561-3568
- "Modulation of quinone PCET reaction by Ca<sup>2+</sup> ion captured by calix[4]quinone in water", J. Am. Chem. Soc, 2013, 135, 18957-18967
- "A Benzobisimidazolium Based Fluorescent and Colorimetric Chemosensor for CQ", 2012, J. Am. Chem. Soc. 2012, 17846-17849
- "Enhancement of Electrogenenerated Chemiluminescence and Radical Stability by Peripheral Multidonors on Alkynylpyrene Derivatives", Angew. Chem. Int. Ed. 2009, 48, 2522-2524

**Others**

- 2012 Pople medal, by Asia-Pacific Association of Theoretical and Computational Chemists (APATCC)
- 2011 SKKU Young Fellow
- 2005 FACS Distinguished Young Scholar Award (by Fedration of Asian Chemical Societies)
- 2006 KCS-Wiley Young Chemist Award (by Korean Chemical Society)
- 2011 Young Physical Chemist Award (Physical Chemistry Division, Korean Chemical Society)