

Sanghwa Jeong

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EDUCATION

2009.02 (B.S.) Chemistry, Pohang University of Science and Technology

2015.02 (Ph.D.) Chemistry, Pohang University of Science and Technology

Thesis: Near Infrared Luminescent Nanoparticles for Bioimaging

EXPERIENCE

Mar 2015 – Nov 2016, Prof. Sungjee Kim (POSTECH) – *Postdoctoral Fellow*

Development of biocompatible quantum dot composites for deep-tissue optical imaging in second near infrared (1000-1700 nm) region

Jan 2017 – Current, Prof. Markita Landry (UC Berkeley) – *Postdoctoral Fellow*

Development of fluorescent chemical sensor based on low-dimensional carbon nanomaterials (ex) graphene oxide quantum dot and carbon nanotube) for neurochemistry imaging

RESEARCH INTEREST AND SKILL

Research Interests:

- Development of deep-tissue-penetrating molecular fluorescent probes to image dynamic electrical (neuronal voltage imaging) and chemical neurosignalling (neurotransmission imaging)

Skills:

- Specialty on the second near infrared optical imaging from the instrument set-up to the development of fluorescent agents
- Synthesis and surface engineering of inorganic nanocrystals including quantum dots, plasmonic metal nanoparticles, and lanthanide-doped nanoparticles and of carbon nanomaterials such as carbon nanotubes and graphene oxide quantum dots
- Fabrication of biocompatible fluorescent nanoparticles for in vivo and in vitro bioimaging

MAJOR PUBLICATIONS

Sanghwa Jeong, Jaejung Song, Wonseok Lee, Yeon Mi Ryu, Yebin Jung, Sang-Yeob Kim, Kangwook Kim, Seong Cheol Hong, Seung Jae Myung, Sungjee Kim, "Cancer-Microenvironment-Sensitive Activatable Quantum Dot Probe in the Second Near-Infrared Window", *Nano Lett.* **2017**, 17, 1378-1386.

Youngrong Park[†], Sanghwa Jeong[†], Sungjee Kim, "Medically Translatable Quantum Dots for Biosensing and Imaging", *J. Photochem. Photobiol. C*, **2017**, 30, 51-70. ([†]equal contribution)

Nayoun Won, Sanghwa Jeong, Kangwook Kim, Jungheon Kwag, Joonhyuck Park, Sang Geol Kim, and Sungjee Kim, "Imaging Depths of Near-Infrared Quantum Dots in First and Second Optical Windows", *Mol. Imaging*, **2012**, 11 (4) 338-52