

Woochul Song

Mobile: +1.814.862.8848

E-mail: wzs17@psu.edu

Education & Position

- Ph.D. student, Chemical Engineering, Pennsylvania State University
Aug 2016 – Present
- Research Scientist, Center for Theragnosis, Korea Institute of Science and Technology
Oct 2015 – Aug 2016
- M.S. in Chemical Engineering, Sungkyunkwan University, South Korea
Mar 2014 – Aug 2015
- B.S. in Chemical Engineering, Sungkyunkwan University, South Korea
Mar 2007 – Feb 2014

Publications

- **W. C. Song**, K.-R. Kim, M. Park, K. E. Lee, D.-R. Ahn, Tuning the Cellular Uptake Behavior of Spherical Nucleic Acids Backbone-Modified Oligonucleotides, submitted.
- M. S. Jang, **W. C. Song**, S. W. Shin, K. S. Park, B.-W. Kim, J. Kim, S. H. Um, A Novel Multigene Cloning Method for the Production of a Motile ATPase, *Journal of Biotechnology* 207, 1-7 (2015).
- **W. C. Song**, S. W. Shin, K. S. Park, M. S. Jang, J.-H. Choi, B.-K. Oh, S. H. Um, Self-illuminative Reaction-cascade-driven Anticancer Therapeutic Cassettes Made of Cooperatively Interactive Nanocomplexes, *Colloids and Surfaces, B: Biointerfaces* 126, 580-584 (2015).
- S. W. Shin, K. S. Park, M. S. Jang, **W. C. Song**, J. Kim, S.-W. Cho, J. Y. Lee, J. H. Cho, S. Jung, S. H. Um, X-DNA Origami-networked Core-supported Lipid Stratum, *Langmuir* 31(3), 912-916 (2015).
- B. J. Kim, S. H. Um, **W. C. Song**, Y. H. Kim, M. S. Kang, J. H. Cho, Water-gel for Gating Graphene Transistors, *Nano Letters* 14(5), 2610-2616 (2014).
- S. W. Shin*, **W. C. Song***, A. R. Kim, S.-W. Cho, D.-I. Kim, S. H. Um, Novel Stem-loop RNA and Drug-bearing DNA Hybrid Nanostructures Specific to LNCaP Prostate Carcinoma, *Biomaterials Science* 2, 76-83 (2014).
*These authors contributed equally to this work.
- **W. C. Song**, H.-J. Sung, K. S. Park, J.-W. Choi, J.-Y. Cho, S. H. Um, Novel Functional Renilla Luciferase Mutant Provides Long-term Serum Stability and High Luminescence Activity, *Protein Expression and Purification* 91(2), 215-220 (2013).
- S. J. Bae, **W. C. Song**, S. H. Jung, S.-W. Cho, D.-I. Kim, S. H. Um, A Gene-networked Gel Matrix-supported Lipid Bilayer as a Synthetic Nucleus System, *Langmuir* 28, 17036-17042 (2012).

Patents

- S. H. Um, **W. C. Song**, "Method of Treating Cancer Using High Efficiency Self-illuminative Nanocomplexes and Method of Manufacturing the Same", U.S. Patent Application No.14/688,439.
- S. H. Um, **W. C. Song**, N. Y. Kim, "Self-illuminative nanocomplexes, preparation method thereof and anticancer composition comprising thereof", Korea Patent Application No.10-2014-0046482.
- S. H. Um, **W. C. Song**, "Renilla luciferase variants having enhanced properties and methods for preparing them", Korea Patent Application No.10-2013-0094308.

Woochul Song

Conferences

- **W. C. Song**, S. W. Shin, I. H. Song, S. H. Um, "Self-illuminative Cascade-reaction-driven Anticancer Therapeutic Cassettes", *European Materials Research Society Annual Spring Meeting*, Lille, France (2015).
- **W. C. Song**, S. H. Um, "Novel Self-illuminative Cooperative Theragnostic Cassettes", *Materials Research Society Annual Spring Meeting*, San Francisco, CA, USA (2014).
- **W. C. Song**, N. Y. Kim, W. J. Shin, S. H. Um, "Construction of a Novel Functional Renilla Luciferase Mutant with Long-term Serum Stability and High Luminescence Activity", *The Korean Society for Biotechnology and Bioengineering Annual Fall Meeting*, Busan, South Korea (2013).
- **W. C. Song**, S. H. Um, "Lipid-supported Gene-networked Hydrogel as a Proto-nucleus System", *Materials Research Society Annual Fall Meeting*, Boston, MA, USA (2012).

Honors & Awards

- Top-up Offer for Graduate Research Assistant, Department of Chemical Engineering, Pennsylvania State University, Aug 2016
- SKKU Presidential Award for Academic and Research Excellence; Grand prize with prize money of \$3000, Feb 2014
- Nomination of Outstanding Research Accomplishment from the National Press; including the Financial News, Electronic Times Internet, National College Journal, Aug 2013

Extracurricular Activities

- Advanced Open Water Diver Certificate, Professional Association of Diving Instructors (PADI), Aug 2011
- Sergeant, Republic of Korea Marine Corps (ROKMC), Apr 2009 – Feb 2011