

## Yoon Seok Jung, Ph.D.

Associate Professor

Department of Energy Engineering, Hanyang University, Seoul 04763, South Korea

**Address:** RM 1018, FTC, 222 Wangsimni-ro, Sageun-dong, Seongdong-gu, Seoul 04763, South Korea

**Phone:** +82-2-2220-2394

**e-mail:** [yoonseok.jung@gmail.com](mailto:yoonseok.jung@gmail.com) or [yoonsjung@hanyang.ac.kr](mailto:yoonsjung@hanyang.ac.kr) **Website:** <http://yoonsjung.hanyang.ac.kr>

### CAREER

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- Mar. 2018-present Associate Professor in Department of Energy Engineering, Hanyang University, Korea  
Mar. 2016-Feb. 2018 Associate Professor in School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), Korea  
Nov. 2011-Feb. 2016 Assistant Professor in School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), Korea  
Oct. 2009-Sept. 2011 Post-doc Researcher in Center for Transportation Technologies and Systems, National Renewable Energy Laboratory, USA  
Apr. 2009-Sept. 2009 Post-doc Researcher in Electrochemical Energy Laboratory & Materials Science and Engineering Program, The University of Texas at Austin, USA  
Jun. 2008-Mar. 2009 Post-doc Researcher in Department of Mechanical Engineering, University of Colorado Boulder, USA

### EDUCATION

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- 2001- 2008 **Ph.D.** in School of Chemical and Biological Engineering, Seoul National University, Rep. of Korea  
Thesis: "Improvement of Cycle Performance and Thermo-electrochemical Activation of Li-alloy-based Materials as Anode for Lithium Secondary Batteries"  
Advisor: Professor Seung M. Oh  
1997-2001 **B.S.** in School of Chemical and Biological Engineering, Seoul National University, Rep. of Korea

### PUBLICATIONS

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WOS Researcher ID: [P-2467-2019](https://orcid.org/0009-0001-2467-2019)

#### Selected Publications

- Kern Ho Park, Dae Yang Oh, Young Eun Choi, Young Jin Nam, Lili Han, Ju-Young Kim, Huolin Xin, Feng Lin, Seung M. Oh\*, **Yoon Seok Jung\***  
"Solution-processable glass Li<sub>1</sub>-Li<sub>4</sub>SnS<sub>4</sub> superionic conductors for all-solid-state Li-ion batteries"  
*Adv. Mater.* **2016**, *28*, 1874.
- Abhik Banerjee, Kern-Ho Park, Jongwook W. Heo, Young Jin Nam, Chang Ki Moon, Seung M. Oh, Seung-Tae Hong\*, **Yoon Seok Jung\***  
"Na<sub>3</sub>SbS<sub>4</sub>: Solution-Processable Na Superionic Conductor for All-Solid-State Na-Ion Batteries"  
*Angew. Chem. Int. Ed.* **2016**, *55*, 9634.
- Dong Hyeon Kim, Dae Yang Oh, Kern Ho Park, Young Eun Choi, Young Jin Nam, Han Ah Lee, Sang Min Lee, **Yoon Seok Jung\***  
"Infiltration of Solution-Processable Solid Electrolytes into Conventional Li-Ion-Battery Electrodes for All-Solid-State Li-Ion Batteries"  
*Nano Lett.* **2017**, *17*, 3013.
- Dae Yang Oh, Young Jin Nam, Kern Ho Park, Sung Hoo Jung, Kyu Tae Kim, A. Reum Ha, **Yoon Seok Jung\***  
"Slurry-Fabricable Li<sup>+</sup>-Conductive Polymeric Binders for Practical All-Solid-State Lithium-Ion Batteries Enabled by Solvate Ionic Liquids"  
*Adv. Energy Mater.* **2019**, *9*, 1802927.
- Kern Ho Park, Qiang Bai, Dong Hyeon Kim, Dae Yang Oh, Yizhou Zhu, Yifei Mo\*, **Yoon Seok Jung\***  
"Design Strategies, Practical Considerations, and New Solution Processes of Sulfide Solid Electrolytes for All-Solid-State Batteries"  
*Adv. Energy Mater.* **2018**, *8*, 1800035. (Invited Progress Report)

#### Other Publications

- Saneyuki Ohno\*, Tim Bernges, Johannes Buchheim, Marc Duchardt, Anna-Katharina Hatz, Marvin A. Kraft, Hiram Kwak, Aggunda L. Santhosha, Zhantao Liu, Nicolo Minafra, Fumika Tsuji, Atsushi Sakuda, Roman Schlem, Shan Xiong, Zhenggang Zhang, Philipp Adelhelm, Hailong Chen, Akitoshi Hayashi, **Yoon Seok Jung**, Bettina V. Lotsch, Bernhard Roling, Nella M. Vargas-Barbosa\*, Wolfgang G. Zeier\*  
"How Certain Are the Reported Ionic Conductivities of Thiophosphate-Based Solid Electrolytes? An Interlaboratory Study"  
*ACS Energy Lett.* **2020**, *5*, 910.

2. Dong Hyeon Kim,<sup>†</sup> Yong-Hyeok Lee,<sup>†</sup> Yong Bae Song, Hiram Kwak, Sang-Young Lee\*, **Yoon Seok Jung\***  
**"Thin and Flexible Solid Electrolyte Membranes with Ultrahigh Thermal Stability Derived from Solution-Processable Li Argyrodites for All-Solid-State Li-Ion Batteries"**  
*ACS Energy Lett.* **2020**, *5*, 718.
3. Sung Hoo Jung, Un-Hyuck Kim, Jae-Hyung Kim, Seungwoo Jun, Chong S. Yoon, **Yoon Seok Jung\***, Yang-Kook Sun\*  
**"Ni-Rich Layered Cathode Materials with Electrochemo-Mechanically Compliant Microstructures for All-Solid-State Li Batteries"**  
*Adv. Energy Mater.* **2020**, *10*, 1903360.
4. Leo Duchene, Dong Hyeon Kim, Yong Bae Song, Seungwoo Jun, Romain Moury, Arndt Remhof\*, Hans Hagemann, **Yoon Seok Jung\***, Corsin Battaglia\*  
**"Crystallization of closo-borate electrolytes from solution enabling infiltration into slurry-casted porous electrodes for all-solid-state batteries"**  
*Energy Storage Mater.* **2020**, *26*, 543.
5. Hiram Kwak, Kern Ho Park, Daseul Han, Kyung-Wan Nam, Hyungsub Kim\*, **Yoon Seok Jung\***  
**"Li<sup>+</sup> conduction in air-stable Sb-Substituted Li<sub>4</sub>SnS<sub>4</sub> for all-solid-state Li-Ion batteries"**  
*J. Power Sources* **2020**, *446*, 227338.
6. Dae Yang Oh, A. Reum Ha, Ji Eun Lee, Sung Hoo Jung, Goojin Jeong, Woosuk Cho, Kyung Su Kim, **Yoon Seok Jung\***  
**"Wet-chemical tuning of Li<sub>3-x</sub>PS<sub>4</sub> (0 ≤ x ≤ 0.3) enabled by dual solvents for all-solid-state lithium-ion batteries"**  
*ChemSusChem* **2020**, *13*, 146.
7. Changjin Yang, Doo Jin Lee, Hyunhong Kim, Kangyong Kim, Jinwhan Joo, Won Bae Kim, Yong Bae Song, **Yoon Seok Jung**, Jongnam Park\*  
**"Synthesis of nano-sized urchin-shaped LiFePO<sub>4</sub> for lithium ion batteries"**  
*RSC Adv.* **2019**, *9*, 13714.
8. Dong Hyeon Kim, Han Ah Lee, Yong Bae Song, Jun Woo Park, Sang Min Lee, **Yoon Seok Jung\***  
**"Sheet-type Li<sub>6</sub>PS<sub>5</sub>Cl-infiltrated Si anodes fabricated by solution process for all-solid-state lithium-ion batteries"**  
*J. Power Sources* **2019**, *426*, 143.
9. Euseob Yang, Jun Gyeong Lee, Dong Hyeon Kim, **Yoon Seok Jung**, Ja Hun Kwak, Eun Duck Park\*, Kwangjin An\*  
**"SiO<sub>2</sub>@V<sub>2</sub>O<sub>5</sub>@Al<sub>2</sub>O<sub>3</sub> core-shell catalysts with high activity and stability for methane oxidation to formaldehyde"**  
*J. Catal.* **2018**, *368*, 134.
10. Sung Hoo Jung, Kyungbae Oh, Young Jin Nam, Dae Yang Oh, Philipp Brüner, Kisuk Kang\*, **Yoon Seok Jung\***  
**"Li<sub>3</sub>BO<sub>3</sub>-Li<sub>2</sub>CO<sub>3</sub>: Rationally Designed Buffering Phase for Sulfide All-Solid-State Li-Ion Batteries"**  
*Chem. Mater.* **2018** *30*, 8190.
11. Chang Ki Moon, Hyun-Jae Lee, Kern Ho Park, Hiram Kwak, Jongwook W Heo, Keunsu Choi, Hyemi Yang, Maeng-Suk Kim, Seung-Tae Hong, Jun Hee Lee\*, **Yoon Seok Jung\***  
**"Vacancy-Driven Na<sup>+</sup> Superionic Conduction in New Ca-doped Na<sub>3</sub>PS<sub>4</sub> for All-Solid-State Na-ion Batteries"**  
*ACS Energy Lett.* **2018** *3*, 2504.
12. Kern Ho Park, Dong Hyeon Kim, Hiram Kwak, Sung Hoo Jung, Hyun-Jae Lee, Abhik Banerjee, Jun Hee Lee, **Yoon Seok Jung\***  
**"Solution-Derived Glass-Ceramic NaI·Na<sub>3</sub>SbS<sub>4</sub> Superionic Conductors for All-Solid-State Na-Ion Batteries"**  
*J. Mater. Chem. A* **2018** *6*, 17192.
13. Young Jin Nam, Kern Ho Park, DaeYang Oh, Woo Hyun An, **Yoon Seok Jung\***  
**"Diagnosis of Failure Modes for All-Solid-State Li-ion Batteries Enabled by Three-Electrode Cells"**  
*J. Mater. Chem. A* **2018** *6*, 14867.
14. Hyun Ho Lee, Jae Bin Lee, Yuwon Park, Kern Ho Park, Mahmut Sait Okay, Dong-Seon Shin, Sunghwan Kim, Jongnam Park, Noejung Park, Byeong-Kwan An, **Yoon Seok Jung**, Hyun-Wook Lee\*, Kyu Tae Lee\*, Sung You Hong\*  
**"Coordination Polymers for High-Capacity Li-Ion Batteries: Metal Dependent Solid-State Reversibility"**  
*ACS Appl. Mater. Interfaces* **2018**, *3*, 7655.
15. Chungho Kim, Hyunhong Kim, Yonghoon Choi, Han Ah Lee, **Yoon Seok Jung**, Jongnam Park\*  
**"A Facile Method to Prepare for the Ni<sub>2</sub>P Nanostructures with Controlled Crystallinity and Morphology as Anode Materials of Lithium Ion Batteries"**  
*ACS Omega* **2018**, *3*, 7655.
16. Tae Won Kim, Kern Ho Park, Young Eun Choi, Ju Yeon Lee, **Yoon Seok Jung\***  
**"Aqueous-Solution Synthesis of Na<sub>3</sub>SbS<sub>4</sub> Solid Electrolytes for All-Solid-State Na-ion Batteries"**  
*J. Mater. Chem. A* **2018**, *6*, 840.
17. Jongwook W. Heo<sup>†</sup>, Abhik Banerjee<sup>†</sup>, Kern Ho Park<sup>†</sup>, **Yoon Seok Jung\***, Seung-Tae Hong\* (†Equally contributed)  
**"New Na-ion Solid Electrolytes Na<sub>4-x</sub>Sn<sub>1-x</sub>Sb<sub>x</sub>S<sub>4</sub> (0.02 ≤ x ≤ 0.33) for All-Solid-State Na-ion Batteries"**  
*Adv. Energy Mater.* **2018** (in press).
18. Young Jin Nam, Dae Yang Oh, Sung Hoo Jung, **Yoon Seok Jung\***  
**"Toward Practical All-Solid-State Lithium-Ion Batteries with High Energy Density and Safety: Comparative Study for Electrodes Fabricated by Dry- and Slurry-Mixing Processes"**  
*J. Power Sources* **2018**, *375*, 93.
19. Dae Yang Oh, Dong Hyeon Kim, Sung Hoo Jung, Jung-Gu Han, Nam-Soon Choi, **Yoon Seok Jung\***  
**"Single-Step Wet-Chemical Fabrication of Sheet-Type Electrodes from Solid-Electrolyte Precursors for All-Solid-State Lithium-ion Batteries"**  
*J. Mater. Chem. A* **2017**, *5*, 20771.
20. Young Eun Choi, Kern Ho Park, Dong Hyeon Kim, Dae Yang Oh, Hi Ram Kwak, Young-Gi Lee, **Yoon Seok Jung\***

- “Coatable  $\text{Li}_4\text{SnS}_4$  solid electrolytes prepared from aqueous solutions for all-solid-state lithium-ion batteries”  
*ChemSusChem* **2017**, *10*, 2605.
21. Sung Hoo Jung, Dong Hyeon Kim, Philipp Brüner, Hyeyoun Lee, Hoe Jin Hah, Seok Koo Kim, **Yoon Seok Jung\***  
“Extremely conductive  $\text{RuO}_2$ -Coated  $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$  for lithium-ion batteries”  
*Electrochim. Acta* **2017**, *232*, 236.
  22. ChungHo Kim, Jin Wook Kim, Chang Hoon Choi, **Yoon Seok Jung**, Jong Nam Park\*  
“Graphene Oxide Assisted Synthesis of Self-assembled Zinc Oxide for Lithium-Ion Battery Anode”  
*Chem. Mater.* **2016**, *28*, 8498.
  23. Jinyoung Chun, Changshin Jo, Sunhye Sahgong, Min Gyu Kim, Eunho Lim, Dong Hyeon Kim, JongKook Hwang, Eunae Kang, Keun Ah Ryu, **Yoon Seok Jung**, Youngsik Kim\*, Jinwoo Lee\*  
“Ammonium Fluoride-Mediated Synthesis of Anhydrous Metal Fluoride/Mesoporous Carbon Nanocomposites for High Performance Lithium-Ion Battery Cathodes”  
*ACS Appl. Mater. Interfaces.* **2016**, *8*, 35180.
  24. Hiesang Sohn, Dong Hyeon Kim, Ran Yi, Duihai Tang, Sang-Eui Lee, **Yoon Seok Jung\***, Donghai Wang\*  
“Semimicro-size agglomerate structured silicon-carbon composite as an anode material for high performance lithium-ion batteries”  
*J. Power Sources.* **2016**, *55*, 9634.
  25. Dae Yang Oh, Young Eun Choi, Young-Gi Lee, Byeong-Su Kim, Jongnam Park, Hiesang Sohn, **Yoon Seok Jung\***  
“All-solid-state lithium-ion batteries with  $\text{TiS}_2$  nanosheets and sulphide solid electrolytes”  
*J. Mater. Chem. A.* **2016**, *4*, 10329.
  26. Dae Yang Oh, Young Jin Nam, Kern Ho Park, Sung-Ju Cho, Yun Kyeong Kim, Young-Gi Lee, Sang-Young Lee, **Yoon Seok Jung\***  
“Excellent Compatibility of Solvate Ionic Liquids with Sulfide Solid Electrolytes: Toward Favorable Ionic Contacts in Bulk-Type All-Solid-State Lithium-Ion Batteries”  
*Adv. Energy Mater.* **2015**, *5*, 1500865.
  27. Young Jin Nam, Sung-Ju Cho, Dae Yang Oh, Jun-Muk Lim, Sung Youb Kim, Jun Ho Song, Young-Gi Lee, Sang-Young Lee\*, **Yoon Seok Jung\***  
“Bendable and Thin Sulfide Solid Electrolyte Film: A New Electrolyte Opportunity for Free-Standing and Stackable High-Energy All-Solid-State Lithium-Ion Batteries”  
*Nano Lett.* **2015**, *15*, 3317.
  28. Hiesang Sohn, Mikhail L. Gordin, Michael Regula, Dong Hyeon Kim, **Yoon Seok Jung**, Jiangxuan Song, Donghai Wang\*  
“Porous Spherical Polyacrylonitrile-Carbon Nanocomposite with High Loading of Sulfur for Li-S Batteries”  
*J. Power Sources*, **2015**, *302*, 70.
  29. **Yoon Seok Jung\***, Dae Yang Oh, Young Jin Nam, Kern Ho Park  
“Issues and Challenges for Bulk-Type All-Solid-State Rechargeable Lithium Batteries Using Sulfide Solid Electrolytes”  
*Israel J. Chem.* **2015**, *6*, 35. (Invited Review)
  30. Jin Wook Kim, Dong Hyeon Kim, Dae Yang Oh, Hyeyoun Lee, Ji Hyun Kim, Jae Hyun Lee, **Yoon Seok Jung\***  
“Surface Chemistry of  $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$  Particles Coated by  $\text{Al}_2\text{O}_3$  Using Atomic Layer Deposition of Lithium-Ion Batteries”  
*J. Power Sources* **2015**, *274*, 1254.
  31. Bum Ryong Shin, Young Jin Nam, Dae Yang Oh, Dong Hyeon Kim, Jin Wook Kim, **Yoon Seok Jung\***  
“Comparative Study of  $\text{TiS}_2/\text{Li-In}$  All-Solid-State Batteries Using Glass-Ceramic  $\text{Li}_3\text{PS}_4$  and  $\text{Li}_{10}\text{GeP}_2\text{S}_{12}$  Solid Electrolytes”  
*Electrochim. Acta* **2015**, *146*, 395.
  32. Youngjin Kim, Yongil Kim, Aram Choi, Sangwon Woo, Duckgyun Mok, Nam-Soon Choi, **Yoon Seok Jung**, Ji Heon Ryu, Seung M. Oh\*, Kyu Tae Lee\*  
“Tin Phosphide as a Promising Anode Material for Na-ion Batteries”  
*Adv. Mater.* **2014**, *26*, 4139.
  33. Bum Ryong Shin, Young Jin Nam, Jin Wook Kim, Young-Gi Lee, **Yoon Seok Jung\***  
“Interfacial Architecture for Extra  $\text{Li}^+$  Storage in All-Solid-State Lithium Batteries”  
*Sci. Reports* **2014**, *4*, 5572.
  34. Bum Ryong Shin, **Yoon Seok Jung\***  
“All-solid-state Rechargeable Lithium Batteries Using  $\text{LiTi}_2(\text{PS}_4)_3$  Cathode with  $\text{Li}_2\text{S-P}_2\text{S}_5$  Solid Electrolyte”  
*J. Electrochem. Soc.* **2014**, *161*, A154.
  35. Seung Hee Woo, Hyung-Woo Lim, Sangbin Jeon, Jonathan J. Travis, Steven M. George, Se-Hee Lee, Yong Nam Jo, Jun Ho Song, **Yoon Seok Jung**, Sung Yon Hong, Nam-Soon Choi, Kyu Tae Lee\*  
“Ion-Exchangeable Functional Binders and Separator for High Temperature Performance of  $\text{Li}_{1.1}\text{Mn}_{1.86}\text{Mg}_{0.04}\text{O}_4$  Spinel Electrodes in Lithium Ion Batteries”  
*J. Electrochem. Soc.* **2013**, *160*, A2234.
  36. **Yoon Seok Jung\***, Peng Lu, Andrew S. Cavanagh, Chunmei Ban, Gi-Heon Kim, Se-Hee Lee, Steven M. George, Stephen J. Harris, Anne C. Dillon,\*  
“Unexpected Improved Performance of ALD Coated  $\text{LiCoO}_2$ /graphite Li-ion Batteries”  
*Adv. Energy Mater.* **2013**, *3*, 213.
  37. Hiesang Sohn, Zheng Chen, **Yoon Seok Jung**, Qiangfeng Xiao, Mei Cai,\* Haigiang Wang,\* Yunfeng Lu,\*  
“Robust Li-ion Anodes Based on Nanocomposites of Iron-Oxide-Carbon-Silicate”  
*J. Mater. Chem. A* **2013**, *1*, 4539.
  38. Minkji Jo, Ho Chun Yoo, **Yoon Seok Jung\***, Jaephil Cho\*  
“Carbon-coated nanostructured  $\text{LiMn}_{0.71}\text{Fe}_{0.29}\text{PO}_4$  cathode for lithium-ion batteries”  
*J. Power Sources* **2012**, *216*, 162.

39. **Yoon Seok Jung\***, Andrew S. Cavanagh, Lynn Gedvilas, Nicodemus E. Widjonarko, Isaac D. Scott, Se-Hee Lee, Gi-Heon Kim, Steven M. George, Anne C. Dillon\*  
"Improved Functionality of Lithium-Ion Batteries Enabled by Atomic Layer Deposition on the Porous Microstructure of Polymer Separators as Well as Coating Electrodes"  
*Adv. Energy Mater.* **2012**, 2, 1022.
40. Joongoo Kang\*, **Yoon Seok Jung**, Su-Huai Wei, Anne C. Dillon  
"Implications of the formation of Small Polarons in Li<sub>2</sub>O<sub>2</sub> and Implications for Li-Air Batteries"  
*Phys. Rev. B* **2012**, 85, 035210.
41. Eunae Kang,<sup>†</sup> **Yoon Seok Jung**,<sup>†</sup> Gi-Heon Kim, Jinyoung Chun, Ulrich Wiesner, Anne C. Dillon\*, Jin Kon Kim\*, Jinwoo Lee\*  
"Highly Improved Rate Capability for a Li-ion Battery nano-Li<sub>4</sub>Ti<sub>5</sub>O<sub>12</sub> Negative Electrode via Carbon-Coated Mesoporous Uniform Pores with a Simple Self Assembly Method"  
*Adv. Funct. Mater.* **2011**, 21, 4349. (<sup>†</sup> **Equally contributed author**)
42. **Yoon Seok Jung**, Andrew S. Cavanagh, Yanfa Yan, Steven M. George, Arumugam Manthiram\*  
"Effects of Atomic Layer Deposition on Li[Li<sub>0.20</sub>Mn<sub>0.54</sub>Ni<sub>0.13</sub>Co<sub>0.13</sub>]O<sub>2</sub> Cathode for Lithium-ion Batteries"  
*J. Electrochem. Soc.* **2011**, 158, A1298.
43. Isaac D. Scott,<sup>†</sup> **Yoon Seok Jung**,<sup>†</sup> Andrew S. Cavanagh, Yanfa Yan, Anne C. Dillon, Steven M. George, Se-Hee Lee\*  
"Ultrathin Coatings on Nano-LiCoO<sub>2</sub> for Li-ion Vehicular Applications"  
*Nano Lett.* **2011**, 11, 414. (<sup>†</sup> **Equally contributed authors**)
44. Kevin Leung, Yue Qi, Kevin R. Zavadil, **Yoon Seok Jung**, Anne C. Dillon, Andrew S. Cavanagh, Se-Hee Lee, Steven M. George  
"Using atomic layer deposition to hinder solvent decomposition in lithium ion batteries: first principles modeling and experimental studies"  
*J. Am. Chem. Soc.* **2011**, 133, 14741.
45. Eunae Kang,<sup>†</sup> **Yoon Seok Jung**,<sup>†</sup> Andrew S. Cavanagh, Gi-Heon Kim, Steven M. George, Anne C. Dillon, Jin Kon Kim\*, Jinwoo Lee\*  
"Fe<sub>3</sub>O<sub>4</sub> Nanoparticles Confined in Mesocellular Carbon Foam for High Performance Anode Materials of Lithium-Ion Batteries"  
*Adv. Funct. Mater.* (<sup>†</sup> **Equally contributed author**) **2011**, 21, 2430.
46. Ji Y. Kwon, Ji Heon Ryu, **Yoon S. Jung**, Seung M. Oh\*  
"Thermo-electrochemical activation of Cu<sub>3</sub>Sn negative electrode for lithium-ion batteries,"  
*J. Alloys Compd.* **2011**, 509, 7595.
47. A. C. Dillon\*, L. A. Riley, **Y. S. Jung**, C. Ban, D. Molina, A. H. Mahan, A. S. Cavanagh, S. M. George, S.-H. Lee,  
"HWCVD MoO<sub>3</sub> nanoparticles and a-Si for next generation Li-ion anodes"  
*Thin Solid Films* **2011**, 519, 4495.
48. James E. Trevey, **Yoon Seok Jung**, Se-Hee Lee\*  
"High Lithium Ion Conducting Li<sub>2</sub>S-GeS<sub>2</sub>-P<sub>2</sub>S<sub>5</sub> Glass-Ceramic Solid Electrolyte with Sulfur Additive for All Solid-State Lithium Secondary Batteries,"  
*Electrochim. Acta* **2011**, 56, 4243.
49. Jinwoo Lee, **Yoon S. Jung**, Scott C. Warren, Marleen Kamperman, Seung M. Oh, Francis J. DiSalvo, Ulrich Wiesner\*  
"Direct Access to Mesoporous Crystalline TiO<sub>2</sub>/Carbon Composites with Large and Uniform Pores for Use as Anode Materials in Lithium Ion Batteries",  
*Macromol. Chem. Phys.* **2011**, 212, 383. (selected as cover picture).
50. Chunmei Ban, Zheng Li, Zhuangchun Wu, Melanie J. Kirkam, Le Chen, **Yoon Seok Jung**, E. Andrew Payzant, Yanfa Yan, M. Stanley Whittingham, Anne C. Dillon\*  
"Extremely Durable High-Rate Capability of the LiNi<sub>0.4</sub>Mn<sub>0.4</sub>Co<sub>0.2</sub>O<sub>2</sub> Cathode Enabled with Single-Wall Carbon Nanotubes"  
*Adv. Energy Mater.* **2011**, 1, 58.
51. James E. Trevey, **Yoon Seok Jung**, Se-Hee Lee  
"Preparation of Li<sub>2</sub>S-GeS<sub>2</sub>-P<sub>2</sub>S<sub>5</sub> Electrolytes by a Single Step Ball Milling for All-Solid-State Lithium Secondary Batteries"  
*J. Power Sources.* **2010**, 195, 4984.
52. Leah A. Riley, Andrew S. Cavanagh, Steven M. George, **Yoon Seok Jung**, Yanfa Yan, Se-Hee Lee, Anne C. Dillon\*  
"Conformal Surface Coatings to Enable High Volume Expansion Li-ion Anode Materials"  
*ChemPhysChem.* **2010**, 11, 2124.
53. **Yoon Seok Jung**, Andrew S. Cavanagh, Leah A. Riley, Sun-Ho Kang, Anne C. Dillon, Markus D. Groner, Steven M. George, Se-Hee Lee\*  
"Ultrathin Direct Atomic Layer Deposition on the Composite Electrode is critical for Highly Durable and Safe Lithium-ion Batteries"  
*Adv. Mater.* **2010**, 22, 2172.
54. **Yoon Seok Jung**, Andrew S. Cavanagh, Anne C. Dillon, Markus D. Groner, Steven M. George, Se-Hee Lee\*  
"Enhanced Stability of LiCoO<sub>2</sub> Cathodes in Lithium-ion Batteries Using Surface-Modification by Atomic Layer Deposition"  
*J. Electrochem. Soc.* **2010**, 157, A75.
55. James Trevey, Jum Suk Jang, **Yoon Seok Jung**, Se-Hee Lee\*  
"Glass-ceramic Li<sub>2</sub>S-P<sub>2</sub>S<sub>5</sub> electrolytes prepared by a single step ball milling process and their application for all-solid-state lithium-ion batteries,"  
*Electrochem. Commun.* **2009**, 11, 1830.
56. Junyoung Mun, **Yoon Seok Jung**, Tae-eun Yim, Hyun Yeong Lee, Hyo-Jin Kim, Yong Gyu Kim, Seung M. Oh\*  
"Electrochemical stability of bis(trifluoromethanesulfonyl)imide-based ionic liquids at elevated temperature as a

- solvent for a titanium oxide bronze electrode”  
*J. Power Sources*. **2009**, 194, 1068.
57. Jun H. Ku, **Yoon Seok Jung**, Kyu T. Lee, Chang H. Kim, and Seung M. Oh\*  
 “Thermoelectrochemically Activated MoO<sub>2</sub> Powder Electrode for Lithium Secondary Batteries”  
*J. Electrochem. Soc.* **2009**, 156, A688.
58. Chang H. Kim, **Yoon Seok Jung**, Kyu T. Lee, Jun H. Ku, and Seung M. Oh\*  
 “The role of *in situ* generated nano-sized metal particles on the coulombic efficiency of MGeO<sub>3</sub> (M = Cu, Fe, and Co) electrodes”  
*Electrochim. Acta* **2009**, 54, 4371.
59. **Yoon Seok Jung**, Sangkyoo Lee, Dongjoon Ahn, Anne C. Dillon, Se-Hee Lee\*  
 “Electrochemical Reactivity of Ball-milled MoO<sub>3-y</sub> Powders as Anode for Lithium Secondary Batteries”  
*J. Power Sources* **2009**, 188, 286.
60. **Yoon Seok Jung**, Kyu T. Lee, Jun H. Kim, Ji Y. Kwon, Seung M. Oh\*  
 “Thermo-electrochemical Activation of In-Cu Intermetallic Electrode for Anode in Lithium Secondary Batteries”  
*Adv. Funct. Mater.* **2008**, 18, 3010.
61. Kyu T. Lee, **Yoon S. Jung**, Ji Y. Kwon, Jun H. Kim, Seung M. Oh\*  
 “Role of electrochemically-driven Cu nanograins in CuGa<sub>2</sub> electrode”  
*Chem. Mater.* **2008**, 20, 447.
62. Kyu T. Lee, **Yoon S. Jung**, Taeahn Kim, Chang H. Kim, Jun H. Kim, Ji Y. Kwon, Seung M. Oh\*  
 “Liquid Gallium Electrode Confined in Porous Carbon Matrix as an Anode for Lithium Secondary Batteries”  
*Electrochem. Solid-State Lett.* **2008**, 11, A21.
63. **Yoon Seok Jung**, Kye T. Lee, Seung M. Oh\*  
 “Si-carbon core-shell composite anode in lithium secondary batteries”  
*Electrochim. Acta* **2007**, 52, 7061.
64. **Yoon Seok Jung**, Kyu T. Lee, Ji Heon Ryu, Dongmin Im, Seung M. Oh\*  
 “Sn-Carbon Core-Shell Powder for Anode in Lithium Secondary Batteries”  
*J. Electrochem. Soc.* **2005**, 152, A1452.
65. Ou Jung Kwon, **Yoon Seok Jung**, Ji Hyun Kim, Seung M. Oh\*  
 “A Simple Preparation Method for Spherical Carbons and Their Anodic Performance in Lithium Secondary Batteries”  
*J. Power Sources*. **2004**, 125, 221.
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 “Formation of Silica-coated Carbon Powder and Conversion to Spherical β-SiC by Carbothermal Reduction”  
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## RESEARCH INTERESTS

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1. **Batteries**
  - A. Lithium-ion batteries
  - B. Sodium-ion batteries
2. **Solid-State Batteries**
  - A. Superionic conductors (solid electrolytes): Li-ion & Na-ion conductors
3. **Atomic Layer Deposition for Energy Storage Applications**
4. Other Electrochemical Energy Storage Systems (e.g., Mg-ion batteries)
5. Other Devices for Electrochemical Energy Conversion & Storage (fuel cell, EDLC)

## PROFESSIONAL SERVICE

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### Guest Editor

- *Energy Storage Materials* (2019, <https://www.journals.elsevier.com/energy-storage-materials/call-for-papers/call-for-papers-special-issue-in-solid-state-batteries>)

### Editorial Board Member

- *Batteries & Supercaps* (Wiley VCH, Dec. 2017 – present, [https://onlinelibrary.wiley.com/page/journal/25666223/homepage/2811\\_edbd.html](https://onlinelibrary.wiley.com/page/journal/25666223/homepage/2811_edbd.html))
- *Scientific Reports* (NPG journal, June 2015 - present)

### Technical Reviewer:

For Peer-Review Journals: *Nature Energy*, *Nature Nanotechnology*, *Advanced Materials*, *Angewandte Chemie*, *Advanced Energy Materials*, *Advanced Functional Materials*, *Nano Letters*, *ACS Nano*, *Journal of the Electrochemical Society*, *Scientific Reports*, *Electrochemistry Communications*, *Chemical Communications*, *Journal of Materials Chemistry A*, *RSC Advances*, *Journal of Power Sources*, and etc.  
 For Habilitation thesis

Organizer for Conferences: *Fall 2016 252<sup>nd</sup> ACS Meeting (ENFL: Innovative Chemistry & Materials for*

*Electroenergy Production & Storage), 2019 MRS Fall Meeting (EN05: Chemomechanical and Interfacial Challenges in Energy Storage and Conversion – Batteries and Fuel Cells)*

Member of Working Group for Samsung Science and Technology Study: Feb 2017-June 217

Editor for Korean Journal of Electrochemistry: Nov 2015-2017

## **PRESENTATIONS**

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**Presented at international conferences**

**18 invited talks**