

CURRICULUM VITAE



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Research Interests

1. Electrochemical Energy Conversion and Storage

Li-ion batteries, All-solid-state batteries, Li-air batteries, Li-S batteries,
Low-temperature fuel cells, Low-temperature water electrolysis

2. Electrochemical Energy-related Nanostructure Materials

3. Electrochemistry-based Applications

Work & Teaching Experiences

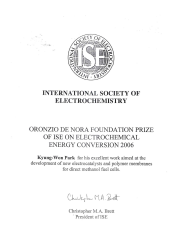
- 2016-present Professor: Soongsil University
2011-2016 Associate Professor: Soongsil University
2005-2011 Assistant Professor: Soongsil University
2014-2019 Editor of Journal of Industrial Engineering and Chemistry (ISSN: 1226-086X)
2004-2005 Postdoctoral Researcher: The Pennsylvania State University, USA
2003-2004 Postdoctoral Researcher: Research Center for Energy Conversion and Storage

Education

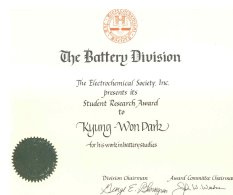
- 1998-2003 Ph. D. Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Gwangju, S. Korea
(Thesis title: Design and Characterization of Pt-based Nanostructure Electrocatalysts for Methanol Electrooxidation in Direct Methanol Fuel Cells)
- 1996-1998 M.S. Materials Science and Engineering, Gwangju Institute of Science and Technology (GIST), Gwangju, S. Korea
(Thesis title: Selective Area MOVPE for Photonic Device Integration)
- 1992-1996 B.E. Materials Science and Engineering, Sungkyunkwan University, Suwon, S. Korea

Awards

- 2020 Best Soongsil Fellow Professor Award, Soongsil University
2019 Best Soongsil Fellow Professor Award, Soongsil University
2018 Best Soongsil Fellow Professor Award, Soongsil University
2017 Best Soongsil Fellow Professor Award, Soongsil University
2016 Best Soongsil Fellow Professor Award, Soongsil University
2014 Best Soongsil Fellow Professor Award, Soongsil University
2013 Best Soongsil Fellow Professor Award, Soongsil University
2012 Best Soongsil Fellow Professor Award, Soongsil University
2011 Best Soongsil Fellow Professor Award, Soongsil University
2006 **Oronzio de Nora Foundation Prize on Electrochemical Energy Conversion, International Society of Electrochemistry (ISE)**



2003 **Student Research Award of the Battery Division, The Electrochemical Society,
USA**



2003 Excellent Graduate Student Award, Gwangju Institute of Science and Technology, BK21
2003 Best Presentation Award, Fuel Cell Symposium, The Korean Electrochemical Society
2002 Best Presentation Award, Fuel Cell Symposium, The Korean Electrochemical Society
2001 Best Presentation Award, The Korean Chemical Society
2000 Best Presentation Award, The Korean Electrochemical Society
1996 -2002 Korean Government Scholarship

Professional Activity

Member of International Society of Electrochemistry (ISE)
Member of Materials Research Society (USA)
Member of The Electrochemical Society (USA)
Member of American Chemical Society (ACS)
Member of The Korean Society of Industrial and Engineering Chemistry
Member of The Korean Electrochemical Society

SCI Publications (citation 9933, h-index 50, as of Oct 2023)

1. "VN/rGO composite structure as an interlayer with dual lithium polysulfide adsorption effect for lithium-sulfur batteries", Yu-Yeon Park, Sang-Hyun Moon, Deok-Hye Park, Jae-Hoon Shin, Ji-Hwan Kim, Jae-Sung Jang, Sung-Beom Kim, Sung-Nam Lee, Kyung-Won Park, **Journal of Alloys and Compounds** 960 (2023) 170812
2. "Lithium-ion exchange membrane water electrolysis using a cationic polymer-modified polyethersulfone membrane", Yong-Soo Lee, Deok-Hye Park, Seon-Ha Park, Yun-Hui Gu, Da-Mi Lim, Sang-Beom Han, Kyung-Won Park, **ACS Sustainable Chemistry & Engineering**, 11(27) (2023) 10183-10190
3. "Fe-doped Co₃O₄ nanostructures prepared via hard-template method and used for the oxygen evolution reaction in alkaline media", Min-Ha Kim, Deok-hye Park, Jeong-Hyeon Byeon, Da-Mi Lim, Yun-Hui Gu, Seon-Ha Park, Kyung-Won Park, **Journal of Industrial Engineering and Chemistry**, 123 (2023) 436-446
4. "Spherical nickel doped cobalt phosphide as an anode catalyst for oxygen evolution reaction in alkaline media: From catalysis to system", Deok-Hye Park, Min-Ha Kim, Myungjae Kim, Jeong-Hyeon Byeon, Jae-Sung Jang, Ji-Hwan Kim, Da-Mi Lim, Seon-Ha Park, Yun-Hui Gu, Jiwoong Kim, Kyung-Won Park, **Applied Catalysis B**, 327 (2023) 122444
5. "Enhanced oxygen reduction reaction performance of Pt catalysts on Nb₂O₅ nanoparticles decorated carbon nanostructures", Woo-Jun Lee, Deok-Hye Park, Hak-Joo Lee, Jeong-Hyeon Byeon, Min-Ha Kim, and Kyung-Won Park, **Materials Science and Engineering B** 289 (2023) 116253
6. "Kirkendall effect-driven formation of hollow PtNi alloy nanostructures with enhanced oxygen reduction reaction performance", Jeong-Hyeon Byeon, Deok-Hye Park, Woo-Jun Lee, Min-Ha Kim, Hak-Joo Lee, Kyung-Won Park, **Journal of Power Sources**, 556 (2023) 232483
7. "Solvothermal synthesis-driven quaternary Ni-rich cathode for stability-improved Li-ion batteries", Sung-Beom Kim, So-Yeon Ahn, Ji-Hwan Kim, Jae-Sung Jang, Kyung-Won Park, **Electrochemistry Communications**, 146 (2023) 107426
8. "Development of a lithium-air battery with an improved redox mediator applicable to gel polymer electrolytes", Jae-Sung Jang, Min-Cheol Kim, Ji-Hwan Kim, Deok-Hye Park, Seong-Nam Lee, Yu-Yeon Park, Min-Ha Kim, Jeong-Hyeon Byeon, Jung, Inn Sohn, Kyung-Won Park, **Journal of Industrial Engineering Chemistry** 117 (2023) 220-226

9. "Porous activated carbons derived from coffee waste for use as functional separators in lithium-sulfur batteries", Jae-Hoon Shin, Yu-Yeon Park, Sang-Hyun Moon, Ji-Hwan Kim, Jae-Sung Jang, Sung-Beom Kim, Sung-Nam Lee, Kyung-Won Park, **Energies** 15 (2022) 7961
10. "High-performance free-standing hybrid solid electrolyte membrane combined with $\text{Li}_6\text{.28Al}_0\text{.24La}_3\text{Zr}_2\text{O}_{12}$ and hexagonal-BN for all-solid-state lithium-based batteries", Ji-Hwan Kim, Deok-Hye Park, Jae-Sung Jang, Jae-Hoon Shin, Min-Cheol Kim, Sung-Beom Kim, Sang-Hyun Moon, Seong-Nam Lee, Kyung-Won Park, **Chemical Engineering Journal** 446(2) (2022) 137035
11. "Polypyrrole coated g-C₃N₄/rGO/S composite as sulfur host for high stability lithium-sulfur batteries", Sang-Hyun Moon, Jae-Hoon Shin, Ji-Hwan Kim, Jae-Sung Jang, Sung-Beom Kim, Yu-Yeon Park, Seong-Nam Lee, Kyung-Won Park, **Mater Chem Phys** 287 (2022) 126267
12. "Multifunctional Catalytic Porous Transport Layer Integrated with Chalcogen Compound for High-Performance Electrochemical Energy Devices", Min-Cheol Kim, Seunghwan Jo, Jaesung Jang, Yong-Soo Lee, Sang-Beom Han, Kyung-Won Park and Jung Inn Sohn, **Applied Surface Science** 590 (2022) 153030
13. "Enhanced cycling performance of Fe-doped LiMn_2O_4 truncated octahedral cathodes for Li-ion batteries", Seong-Nam Lee, Sang-Hyun Moon, Deok-Hye Park, Ji-Hwan Kim, Jae-Sung Jang, Sung-Beom Kim, Jae-Hun Shin, Yu-Yeon Park, Kyung-Won Park, **ChemElectroChem** 9(11) (2022) e202200385
14. "Highly Efficient Lithium-ion Exchange Membrane Water Electrolysis", Yong-Soo Lee, Yong-Hwan Mo, Deok-Hye Park, Woo-Jun Lee, Hak Joo Lee, Hyun-Suk Park, Sang-Beom Han, Kyung-Won Park, **J Power Sources**, 529 (2022) 231188
15. "High absorption and fast polysulfides conversion of dual functional separator based on mesoporous-WC/rGO composite for lithium-sulfur batteries", Sang-Hyun Moon, Ji-Hwan Kim, Jae-Hoon Shin, Jae-Sung Jang, Sung-Beom Kim, Seong-Nam Lee, Suk-Hui Kwon, Kyung-Won Park, **J Alloys and Compounds**, 904 (2022) 164120
16. "New Highly Stable Ionic Compounds Composed of Multivalent Graphene Quantum Dot Anions and Alkali Metal Cations", Hong-Chul Lim, Min-Chul Kim, Ayoung Kim, Eunji Park, Yunjae Park, Rakwoo Chang, Jong-In Hong, Kyung-Won Park*, Ik-Soo Shin*, Hansu Kim*, **Batteries & Supercaps**, (2022) e202100337
17. "Development of Ni-Ir oxide composites as oxygen catalysts for an anion-exchange membrane water electrolyzer", Deok-Hye Park, Min-Ha Kim, Hak-Joo Lee, Woo-Jun Lee,

- Jeong-Hyeon Byeon, Ji-Hwan Kim, Jae-Sung Jang, Kyung-Won Park, **Adv Mater Inter**, (2022) 2102063
18. "Coffee waste-derived one-step synthesis of a composite structure with Ge nanoparticles surrounded by amorphous carbon for Li-ion batteries", Jae-Hoon Shin, Deok-Hye Park, Woo-Jun Lee, Sang-Hyun Moon, Jin-Hyeok Choi, Ji-Hwan Kim, Jae-Sung Jang, Sung-Beom Kim, Kyung-Won Park, **J Alloys and Compounds** 889 (2021) 161685
 19. "Mesoporous Spinel Ir-doped NiCo₂O₄ Nanostructure as an Efficient Catalyst for Oxygen Evolution Reaction" Hak Joo Lee, Deok-Hye Park, Woo-Jun Lee, Sang-Beom Han, Min-Ha Kim, Jeong-Hyeon Byeon, Kyung-Won Park, **Applied Catalysis A** 626 (2021) 118377
 20. "Enhanced electrochemical performance of a selectively formed V₂O₃/C composite structure for Li-ion batteries", Ji-Hwan Kim, Yo-Seob Kim, Sang-Hyun Moon, Min-Cheol Kim, Jin-Hyeok Choi, Deok-Hye Park, Jae-Hoon Shin, Kyung-Won Park, **Electrochimica Acta**, 389 (2021) 138685
 21. "Li-ion diffusivity and electrochemical performance of high-nickel cathode material doped with fluoride ions", Sung-Beom Kim, Hyeona Kim, Deok-Hye Park, Ji-Hwan Kim, Jae-Hoon Shin, Jae-Sung Jang, Sang-Hyun Moon, Jin-Hyuk Choi Kyung-Won Park, **Journal of Power Sources**, 506 (2021) 230219
 22. "Top-down preparation of Ni-Pd-P@graphitic carbon core-shell nanostructure for electrocatalytic reactions", Deok-Hye Park, Yo-Seob Kim, Sang-Beom Han, Woo-Jun Lee, Hak-Joo Lee, Yong-Soo Lee, Sang-Hyun Moon, Kyung-Won Park, **International Journal of Hydrogen Energy**, 46 (2021) 22499-22507
 23. "Synergistically enhanced electrocatalytic stability of Pt catalyst supported by doped porous carbon nanostructure", Suk-Hui Kwon, Seul-Gi Lee, Sang-Beom Han, Kyung-Won Park, **Electrocatalysis** 11(5) (2021) 497-504
 24. "1T-MoS₂/carbon nanofiber composite as an interlayer fabricated by an in situ electrochemical fabrication method for lithium-sulfur batteries", Sang-Hyun Moon, Min-Cheol Kim, Hyeona Kim, Yo-Seob Kim, Jin-Hyeok Choi, Kyung-Won Park, **Journal of Alloys Compounds** 857 (2020) 158236
 25. "Synthesis of highly conductive titanium suboxide support materials with superior electrochemical durability for proton exchange membrane fuel cells", Min-Cheol Kim, Namchul Cho, Tae Jun Kang, Nguyen The Manh, Young-Woo Lee, Kyung-Won Park, **Molecular Crystals and Liquid Crystals**, 707(1) (2020) 110– 117

26. "Antioxidant activity of hydrogen water mask pack composed of gel-type emulsion and hydrogen generation powder", Hye-Jin Kwon, Sang-Beom Han, Kyung-Won Park, **International Journal of Molecular Sciences**, 21(24) (2020) 9731
27. "Cycling system for decomposition of gaseous benzene by hydrogen peroxide with Fe-containing activated carbon", Yong-Soo Lee, Y.-H Mo, S.-B. Han, JiHyeon Song, Seongho Hong, Kyung-Won Park, **RSC Advances** 10 (2020) 39121-39129
28. "Improved electrochemical properties of LiNi_{0.8}Co_{0.15}Al_{0.05}O₂ cathode materials synthesized using micelle structures", Sang-Hyun Moon, Eun-Soo Kim, Ji-Eun Lee, Yeon-Kyung Shin, Min-Cheol Kim, Kyung-Won Park, **Journal of Solid State Electrochemistry** 24 (2020) 2233-2240
29. "Fluorine doped LiNi_{0.8}Mn_{0.1}Co_{0.1}O₂ cathode for high-performance lithium-ion batteries", Hyeona Kim, Min-Cheol Kim, Yo-Seob Kim, Jin-Hyeok Choi, Kyung-Won Park, **Energies** 13 (2020) 4808
30. "Effect of Sb-doped SnO₂ nanostructures on electrocatalytic performance of a Pt catalyst for methanol oxidation reaction", Seul-Gi Lee, Sang-Beom Han, Woo-Jun Lee, Kyung-Won Park, **Catalysts** 10(8) (2020) 866
31. "Enhanced electrochemical performance of MoS₂-graphite nanosheet nanocomposites", Jin-Hyeok Choi, Min-Cheol Kim, Sang-Hyun Moon, Hyeona Kim, Yo-Seob Kim, Kyung-Won Park, **RSC Advances**, 10 (2020) 19077-19082
32. "Ni₂P/graphitic carbon nanostructure electrode with superior electrochemical performance", Yo-Seob Kim, Min-Cheol Kim, Sang-Hyun Moon, Hyeona Kim, Kyung-Won Park, **Electrochimica Acta**, 341 (2020) 136045
33. "Biomimetic Cathodes Applying Imprinted Carbon Paper with Vortex for Enhanced Oxygen Reduction Reaction of Lithium-Air Batteries", Joonha Jun, Min-Cheol Kim, Jin-Young So, Chan-Ho Lee, Hyeona Kim, Yo-Seob Kim, Kyung-Won Park*, Won-Gyu Bae*, **ACS Sustainable Chemistry & Engineering** 8(11) (2020) 4325-4330
34. "Porous SnO₂ nanostructure with a high specific surface area for improved electrochemical performance", Hyeona Kim, Min-Cheol Kim, Sung-Beom Kim, Yo-Seob Kim, Jin-Hyeok Choi, Kyung-Won Park, **RSC Advances** 10 (2020) 10519-10525

35. "Polymeric Redox Mediator as a Stable Cathode Catalyst for Lithium-O₂ Batteries", Min-Cheol Kim, Sojeong Choi, Hyeona Kim, Sang-Beom Han, Sang-Hyun Moon, Eun-Soo Kim, Yo-Seob Kim, Kyung-Won Park, **Journal of Power Sources**, 453(31) (2020) 227850
36. "Emission characteristics of particulate matter, odors, and volatile organic compounds from the grilling of pork", Yun-Yeong Lee, Hyungjoo Park, Yoonjoo Seo, Jeonghee Yun, Jihyun Kwon, Kyung-Won Park, Sang-Beom Han, Kyung Chel Oh, Jun-Min Jeon, Kyung-Suk Cho, **Environmental Research** 183 (2020) 109162
37. "Mesoporous Iridium Oxide/Sb-doped SnO₂ Nanostructured Electrodes for Polymer Electrolyte Membrane Water Electrolysis", Sang-Beom Han, Yong-Hwan Mo, Yong-Soo Lee, Seul-Gi Lee, Deok-Hye Park and Kyung-Won Park, **International Journal of Hydrogen Energy** 45 (3) 1409-1416
38. "Chemical valence electron-engineered LiNi_{0.4}Mn_{1.5}MtO₄ (Mt=Co and Fe) cathode materials with high-performance electrochemical properties", Min-Cheol Kim, Young-Woo Lee, Tuan Kiet Pham, Jung Inn Sohn, Kyung-Won Park, **Applied Surface Science** 504 (2020) Article 144514
39. "F-doped Li_{1.15}Ni_{0.275}Ru_{0.575}O₂ cathode materials with long cycle life and improved rate performance", Sojeong Choi, Min-Cheol Kim, Sang-Hyun Moon, Hyeona Kim, Kyung-Won Park, **Electrochimica Acta** 326 (2019) 135015
40. "Doped porous carbon nanostructure materials as non-precious metal cathode catalysts for oxygen reduction reaction in acid and alkaline media", Suk-Hui Kwon, Sang-Beom Han, Da-Hee Kwak, JiHyeon Song, and **Kyung-Won Park**, **Journal of Industrial Engineering Chemistry** 80 (2019) 171-181
41. "Evaluation of antioxidant activity of amaranthus hypochondriacus L. extract using cyclic voltammetry", Hye-Jin Kwon, Na-Seul Jung, Sang-Beom Han, **Kyung-Won Park**, **Electrochemistry**, 87(6) (2019) 336-340
42. "Facile one-pot synthesis of Ge/TiO₂ nanocomposite materials with improved electrochemical performance", Hyeona Kim, Min-Cheol Kim, Sojeong Choi, Sang-Hyun Moon, Yo-Seob Kim, **Kyung-Won Park**, **Nanoscale** 11 (2019) 17415-17424
43. "Organic ligand-free PtIr alloy nanostructures for superior oxygen reduction and evolution reactions", Jin-Young Park, Hyun-Suk Park, Sang-Beom Han, Da-Hee Kwak, Ji-Eun Won, Taeho Lim, **Kyung-Won Park**, **Journal of Industrial Engineering Chemistry**, 77 (2019) 105-110

44. "Surface modified and size-controlled octahedral Cu₂O nanostructured electrodes for lithium-ion batteries", Eun-Soo Kim, Min-Cheol Kim, Sang-Hyun Moon, Yeon-Kyung Shin, Ji-Eun Lee, Sojeong Choi, **Kyung-Won Park**, *Journal of Alloys and Compounds*, 794 (2019) 84-93
45. "Role of polyvinylpyrrolidone in electrochemical performance of Li₂MnO₃ cathode for lithium-ion batteries", Ji-Eun Lee, Min-Cheol Kim, Sang-Hyun Moon, Eun-Soo Kim, Yeon-Kyung Shin, Sojeong Choi, Suk-Hui Kwon, Si-Jin Kim, Hye-Jin Kwon, and **Kyung-Won Park**, *RSC Advances*, 9 (2019) 10297-10304
46. "TiO₂-coated LiCoO₂ electrodes fabricated by sputtering method for lithium-ion batteries with enhanced electrochemical performance", Sang-Hyun Moon, Min-Cheol Kim, Eun-Soo Kim, Yeon-Kyung Shin, Ji-Eun Lee, Sojeong Choi, **Kyung-Won Park**, *RSC Advances*, 9(14) (2019) 7903-7907
47. "Pore-controlled polymer membrane with Mn(II) ion trapping effect for high-rate performance LiMn₂O₄ cathode", Yeon-Kyung Shin, Min-Cheol Kim, Sang-Hyun Moon, Eun-Soo Kim, Ji-Eun Lee, Sojeong Choi, Hyeona Kim, **Kyung-Won Park**, *Journal of Solid State Electrochemistry* 23(2) (2019) 474-484
48. "Fe nanoparticles encapsulated in doped graphitic shells as a high-performance and stable catalyst for oxygen reduction reaction in an acid medium", Hyun-Suk Park, Sang-Beom Han, Da-Hee Kwak, Jae-Hee Han, and **Kyung-Won Park**, *Journal of Catalysis*, (2019) 370 (2019) 130-137
49. "Systematic design of hierarchical Ni₃S₂/MoO₂ nanostructures grown on 3D conductive substrate for high-performance pseudocapacitors", Young-Woo Lee, Min-Cheol Kim, Quoc Hung Nguyen, Wook Ahn, Jae-Eun Jung, **Kyung-Won Park**, Jung Inn Shon, *Ceramics International*, 45(2) (2019) 2670-2675
50. "Stress-relieved Si anode on a porous Cu current collector for high-performance lithium-ion batteries", Sang-Hyun Moon, Si-Jin Kim, Min-Cheol Kim, Jin-Young So, Ji-Eun Lee, Yeon-Kyung Shin, Sang-Beom Han, Da-Hee Kwak, Won-Gyu Bae, **Kyung-Won Park**, *Materials Chemistry and Physics*, 223 (2019) 152-156
51. "High-performance direct ethanol fuel cells with reduction of nitrate as a liquid cathode catalyst", Kyung-Bae Ma, Da-Hee-Kwak, Sang-Beom Han, Hyun-Suk Park, Suk-Hui Kwon, and **Kyung-Won Park**, *International Journal of Hydrogen Energy*, 43(36) (2018) 17265-17270

52. "Investigation of the durability of Fe/N-doped mesoporous carbon nanostructure as a non-precious metal catalyst for oxygen reduction reaction in acid medium", Da-Hee Kwak, Sang-Beom Han, Do-Hyoung Kim, Jin-Young Park, Kyeng-Bae Ma, Ji-Eun Won, Min-Cheol Kim, Sang-Hyun Moon, **Kyung-Won Park**, *Carbon*, 140 (2018) 189-200
53. "Micro-patterned 3D Si electrodes fabricated using an imprinting process for high-performance lithium ion batteries", Si-Jin Kim, Sang-Hyun Moon, Min-Cheol Kim, Jin-Young So, Sang-Beom Han, Da-Hee Kwak, Won-Gyu Bae, and **Kyung-Won Park***, *Journal of Applied Electrochemistry*, 48(9) (2018) 1057-1068
54. "Stress Dispersed Cu Metal Anode by Laser Multiscale Patterning for Lithium-Ion Batteries with High Capacity", Jin-Young So, Sang-Hyun Moon, Min-Cheol Kim, Si-Jin Kim, Sang-Beom Han, Chan-Ho Lee, Ji-Eun Kim, Hyun-Jee Kim, Joonha Jun, Ki-Young Song, **Kyung-Won Park**, and Won-Gyu Bae, *Metals*, 8(6) (2018) 410-420
55. "Amino acid-derived non-precious catalysts with excellent electrocatalytic performance and methanol tolerance in oxygen reduction reaction", Da-Hee Kwak, Sang-Beom Han, Do-Hyoung Kim, Ji-Eun Won, **Kyung-Won Park**, *Applied Catalysis B*, 239 (2018) 93-103
56. "Sea Urchin-like Li₄Ti₅O₁₂ Nanostructure as a Li-Ion Battery Anode with High Energy Density and Improved Ionic Transport", Min-Cheol Kim, Sang-Hyun Moon, Sang-Beom Han, Da-Hee Kwak, Ji-Eun Lee, Eun-Soo Kim, Sojeong Choi, Yeon-Kyung Shin and **Kyung-Won Park**, *Journal of Alloys and Compounds*, 767 (2018) 73-80
57. "Direct ethanol fuel cells with superior methanol-tolerant non-precious metal cathode catalysts for oxygen reduction reaction", Kyung-Bae Ma, Da-Hee-Kwak, Sang-Beom Han, Hyun-Suk Park, Do-Hyoung Kim, Ji-Eun Won, Suk-Hui Kwon, Min-Cheol Kim, Sang-Hyun Moon, and **Kyung-Won Park**, *ACS Sustainable Chemistry & Engineering*, 6(6) (2018) 7609-7618
58. "Nature Inspired Cathodes using High-density Carbon Papers with Eddy Current Effect for High-rate Performance Li-air Batteries", Min-Cheol Kim, Jin-Young So, Sang-Hyun Moon, Sang-Beom Han, Sojeong Choi, Eun-Soo Kim, Yeon-Kyung Shin, Ji-Eun Lee, Da-Hee Kwak, Chanho Lee, Won-Gyu Bae, and **Kyung-Won Park**, *Journal of Materials Chemistry A* 6 (2018) 9550-9560
59. "3D yolk-shell Si@void@CNF nanostructured electrodes with improved electrochemical performance for lithium-ion batteries", Sojung Choi, Min-Cheol Kim, Sang-Hyun Moon, Ji-Eun Lee, Eun-Soo Kim, Yeon-Kyung Shin, and **Kyung-Won Park**, *Journal of Industrial Engineering Chemistry*, 64 (2018) 344-351

60. "A chemically regenerative redox fuel cell using (2,2,6,6-tetramethylpiperidin-1-yl)oxyl redox reaction in acid medium", Sang-Beom Han, Da-Hee Kwak, Hyun Suk Park, Jin-Young Park, Kyeng-Bae Ma, Ji-Eun Won, Do-Hyoung Kim, Min-Cheol Kim, and **Kyung-Won Park**, *Journal of Power Sources*, 393 (2018) 32-36
61. "Nitrogen-doped bi-modal porous carbon nanostructure derived from glycine for supercapacitors", In-Ae Choi, Da-Hee Kwak, Sang-Beom Han, **Kyung-Won Park**, *Journal of Industrial Engineering Chemistry*, 63 (2018) 112-116
62. "Molybdenum carbide embedded in carbon nanofiber as a 3D flexible anode with superior stability and high-rate performance for Li-ion batteries", Gyo-Ho Lee, Sang-Hyun Moon, Min-Cheol Kim, Si-Jin Kim, Sojeong Choi, Eun-Soo Kim, Sang-Beom Han, and **Kyung-Won Park**, *Ceramics International*, 44 (2018) 7972-7977.
63. "MoS₂-TiN nanostructured electrodes fabricated using co-sputtering deposition method for high-performance lithium-ion batteries", Sang-Hyun Moon, Si-Jin Kim, Min-Cheol Kim, Gyu-Ho Lee, Hui-Seon Choe, Sang-Beom Han, Jong-Ho Choi, and **Kyung-Won Park**, *Journal of Alloys and Compounds*, 741 (2018) 1048-1054.
64. "Enhanced oxygen reduction reaction of Pt deposited Fe/N-doped bimodal porous carbon nanostructure catalysts", Jin-Young Park, Da-Hee Kwak, Kyeng-Bae Ma, Sang-Beom Han, Geun Seok Chai, Chang-Soo Kim, Dong-Hyun Peck, Sang-Kyung Kim, Anthony Kucernak, **Kyung-Won Park**, *Journal of Catalysis*, 359 (2018) 46-54.
65. "PtIr/Ti₄O₇ as a bifunctional electrocatalyst for improved oxygen reduction and oxygen evolution reactions", Ji-Eun Won, Da-Hee Kwak, Sang-Beom Han, Hyun-Suk Park, Jin-Young Park, Kyeng-Bae Ma, Do-Hyoung Kim, **Kyung-Won Park**, *Journal of Catalysis*, 358 (2018) 287-294.
66. "The role of arginine as nitrogen doping and carbon source for enhanced oxygen reduction reaction ", Do-Hyung Kim, Da-Hee-Kwak, Sang-Beom Han, Hyun-Suk Park, Jin-Young Park, Ji-Eun Won, Kyeng-Bae Ma, Seok-Hyeon Yun, Suk-Hui Kwon, Moon Hyun Koh, **Kyung-Won Park**, *International Journal of Hydrogen Energy*, 43 (2018) 1479-1488
67. "In-situ synthesis of Ge/Ti₄O₇ composite with enhanced electrochemical properties", Hui-Seon Choe, Min-Cheol Kim, Sang-Hyun Moon, Eun-Soo Kim, Si-Jin Kim, Gyu-Ho Lee, Ji-Eun Won, **Kyung-Won Park**, *Ceramics International*, 44 (2018) 663-668.
68. "Electrochemical catalytic contribution of transition metals at the center of porphyrin macrocycle structures as catalysts for oxygen reduction reaction", Do-Hyung Kim, Da-Hee-

- Kwak, Sang-Beom Han, Hyun-Suk Park, Jin-Young Park, Ji-Eun Won, Kyoung-Bae Ma, **Kyung-Won Park**, *Journal of Industrial Engineering Chemistry*, 57 (2017) 200-204.
69. "Sulfur-doped porphyrinic carbon nanostructures synthesized by amorphous MoS₂ for oxygen reduction reaction in an acid medium", Hyun-Suk Park, Sang-Beom Han, Da-Hee Kwak, Gyu-Ho Lee, In-Ae Choi, Do-Hyoung Kim, Kyeng-Bae Ma, Min-Cheol Kim, Hye-Jin Kwon, **Kyung-Won Park**, *ChemSusChem*, 10 (2017) 2202-2209.
70. "Doped porous carbon nanostructures as non-precious metal catalysts prepared by amino acid glycine for oxygen reduction reaction", In-Ae Choi, Da-Hee Kwak, Sang-Beom Han, Jin-Young Park, Hyun-Suk Park, Kyeng-Bae Ma, Do-Hyoung Kim, Ji-Eun Won, **Kyung-Won Park**, *Applied Catalysis B: Environmental*, 211 (2017) 235-244.
71. "3-dimensional Si/carbon nanofiber as a binder/current collector-free anode for lithium-ion batteries", Si-Jin Kim, Min-Cheol Kim, Sang-Beom Han, Gyu-Ho Lee, Hui-Seon Choe, Sang-Hyun Moon, Da-Hee Kwak, Seongho Hong, **Kyung-Won Park**, *Journal of Industrial Engineering Chemistry*, 49 (2017) 105-111.
72. "High-Performance Chemically Regenerative Redox Fuel Cells using a NO₃⁻/NO Regeneration Reaction", Sang-Beom Han, Da-Hee Kwak, Hyun Suk Park, In-Ae Choi, Jin-Young Park, Si-Jin Kim, Min-Cheol Kim, Seongho Hong, and Kyung-Won Park, *Angewandte Chemie International Edition*, 56 (2017) 2893-2897.
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