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William P. Harris Career Development Assistant Professor

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EDUCATION/TRAINING

POSTDOCTORAL ASSOCIATE, 10/2011 – 07/2015

Department of Materials Science & Engineering, Stanford University

PH.D., BIOMEDICAL ENGINEERING, 2011

Washington University in St. Louis

M.S., CHEMISTRY, 2007

Key Laboratory of Advanced Energy Materials Chemistry, Nankai University, China

B.S., CHEMISTRY, 2004

Nankai University, China

APPOINTMENTS

ASSISTANT PROFESSOR OF ENGINEERING, 01/2016 – PRESENT

Thayer School of Engineering, Dartmouth College

ADJUNCT ASSISTANT PROFESSOR OF CHEMISTRY, 07/2018 – PRESENT

Thayer School of Engineering, Dartmouth College

RESEARCH SCIENTIST, 09/2015 – 12/2015

Thayer School of Engineering, Dartmouth College

AREAS OF EXPERTISE

Energy materials; functional nanomaterials design and synthesis; electrochemistry and electrochemical engineering; structure-property correlations; energy storage and conversion devices; cost-effective batteries; electrocatalysis; conversion of CO₂; development of new catalytic materials and architectures

TEACHING

Materials Science; Electrochemical Engineering; Nanotechnology

ENGS 24 Science of Materials

ENGS 138 Corrosion and Degradation of Materials

ENGG 199 Advanced Electrochemical Energy Materials

AWARDS

- *Nano Letters* Early Career Advisory Board, American Chemical Society, 2018
- *NASA Early Career Faculty Award*, 2018
- *2017 Highly Cited Researchers*, Rank in the top 1% by citations for field and publication year in *Web of Science*
- *Young Investigator Program Award* recipient, The Air Force Office of Scientific Research, 2017
- Shortlisted (final 10, out of >250 entries) for *Nanotechnology Young Researcher Award*, Institute of Physics, 2015

- The State Natural Science Award, the State Council of the People's Republic of China, 2011
- Presentation Award, MRS Spring Meeting, San Francisco, CA, 2009
- Academic Award of Extraordinary Researcher, Nankai University, 2006
- Outstanding Academic Award, 1st Class, Nankai University, 2005
- *Yangshixian* Chemistry Award, Nankai University, 2005
- *Yizhong* Enterprise Award, Nankai University, 2003

PROFESSIONAL ACTIVITIES

- Reviewer for >30 peer review journals, including *Nano Letters*, *Nanoscale*, *Angewandte Chemie*, *Chemical Communications*, *Advanced Materials*, *Advanced Energy Materials*, *Chemistry—A European Journal*, *Chemistry—An Asian Journal*, *RSC Advances*, *Advanced Functional Materials*, *ACS Applied Materials & Interfaces*, *ChemNanoMat*, *Small*, *Nanotechnology*, *Journal of Alloys and Compounds*, *Progress in Energy and Combustion Science*, *ACS Sensors*, *Chemistry of Materials*, *The Journal of Electrochemical Society*, *ACS Energy Letters*, *Energy Storage Materials*, *iScience*, and many others
- Member of American Chemical Society (ACS) & Materials Research Society (MRS)
- NSF panel reviewers, including *Batteries* Panel (Energy for Sustainability Program, CBET), *Electrocatalysis* Panel (Catalysis Program, CBET), Nanomanufacturing Program (CMMI)
- Editorial board of *Applied Sciences* (MDPI publisher) & advisory board of *Sci* (MDPI publisher)
- *Nano Letters* Early Career Advisory Board, American Chemical Society

PUBLICATIONS

(Citations: >16,000; h-index: 50; source: Google Scholar Citation, 1/2019)

*Corresponding author

- 69 Matios, E.; Wang, H.; Wang, C.; Hu, X.; Lu, X.; Luo, J.; **Li, W.*** Graphene Regulated Ceramic Electrolyte for Solid-State Sodium Metal Battery with Superior Electrochemical Stability. *ACS Applied Materials & Interfaces*, **2019**, DOI: 10.1021/acsami.8b19519.
- 68 Hu, X.; Joo, P. H.; Wang, H.; Matios, E.; Wang, C.; Luo, J.; Lu, X.; Yang, K.; **Li, W.*** Nip the Sodium Dendrites in the Bud on Planar Doped Graphene in Liquid/Gel Electrolytes. *Advanced Functional Materials*, **2019**, DOI: 10.1002/adfm.201807974.
- 67 Luo, J.; Zhang, W.; Yuan, H.; Jin, C.; Sheng, O.; Fang, R.; Huang, H.; Liang, C.; Xia, Y.; Zhang, J.; Gan, Y.; **Li, W.*** Tao, X. Atomic Sulfur Covalently Engineered Interlayers of Ti₃C₂ MXene for Ultra-Fast Sodium Ion Storage by Enhanced Pseudocapitance. *Advanced Functional Materials*, **2019**, DOI: 10.1002/adfm.201808107.
- 66 Wang, C.; Wang, H.; Matios, E.; Hu, X.; Luo, J.; Zhang, Y.; Lu, X.; **Li, W.*** Frogspawn-Coral-Like Hollow Sodium Sulfide Nanostructured Cathode for High-Rate Performance Sodium-Sulfur Batteries. *Advanced Energy Materials*, **2018**, DOI: 10.1002/aenm.201803251.
- 65 Lu, X.; Wang, Z.; Liu, K.; Luo, J.; Wang, P.; Niu, C.; Wang, H.; **Li, W.*** Hierarchical Sb₂MoO₆ Microspheres for High-Performance Sodium-Ion Battery Anode. *Energy Storage Materials*, **2018**, DOI: 10.1016/j.ensm.2018.11.021.
- 64 Luo, J.; Wang, C.; Wang, H.; Hu, X.; Matios, E.; Lu, X.; W. Zhang, X. Tao, **Li, W.*** Pillared MXene with Ultralarge Interlayer Spacing as a Stable Matrix for High Performance Sodium Metal Anodes. *Advanced Functional Materials*, **2018**, DOI: 10.1002/adfm.201805946.
- 63 Wang, C.; Wang, H.; Matios, E.; Hu, X.; **Li, W.*** Chemically-engineered porous copper matrix with cylindrical core-shell skeleton as a stable host for metallic sodium anode. *Advanced Functional Materials*, **2018**, 28, 1802282.

- 62 Wang, H.; Wang, C.; Matios, E.; **Li, W.*** Facile stabilization of sodium metal anode with additives: unexpected key role of sodium polysulfide and adverse effect of sodium nitrate. *Angewandte Chemie International Edition*, **2018**, *57*, 7734–7737.
- 61 J. Luo, C. Fang, C. Jin, H. Yuan, O. Sheng, R. Fang, W. Zhang, H. Huang, Y. Gan, Y. Xia, C. Liang, J. Zhang, **Li, W.***, X. Tao* Tunable Pseudocapacitance Storage of MXene by Cation Pillaring for High-Performance Sodium Ion Capacitors. *Journal of Materials Chemistry A* **2018**, *6*, 7794–7806.
- 60 Wang, H.; Wang, C.; Matios, E.; **Li, W.*** Critical Role of Ultrathin Graphene Films with Tunable Thickness in Enabling Highly Stable Sodium Metal Anodes. *Nano Letters*, **2017**, *17*, 6808–6815.
- 59 Liu, W.; **Li, W.**; Zhuo, D.; Zheng, G.; Lu, Z.; Liu, K.; Cui, Y. Core-Shell Nanoparticle Coating as an Interfacial Layer for Dendrite-Free Lithium Metal Anodes. *ACS Central Science*, **2017**, *3*, 135-140.
- 58 **Li, W.**; Liang, Z.; Lu, Z.; Tao, X.; Liu, K.; Yao, H.; Cui, Y. Magnetic Field-Controlled Lithium Polysulfide Semiliquid Battery with Ferrofluidic Properties. *Nano Letters*, **2015**, *15*, 7394–7399.
- 57 **Li, W.**; Yao, H.; Yan, K.; Zheng, G; Liang, Z.; Chiang, Y-. M.; Cui, Y. The Synergetic Effect of Lithium Polysulfide and Lithium Nitrate to Prevent Lithium Dendrite Growth. *Nature Communications* **2015**, *6*, 7436.
- 56 **Li, W.**; † Liang, Z.; † Lu, Z.; Yao, H.; Seh, Z. W.; Yan, K.; Zheng, G; Cui, Y. Sulfur Cathode with Pomegranate-Like Cluster Structure. *Advanced Energy Materials* **2015**, DOI:10.1002/AENM.201500211. (†Co-first author)
- 55 **Li, W.**; Zheng, G; Yuan, Y.; Seh, Z. W.; Liu, N.; Cui, Y. High-performance hollow sulfur nanostructured battery cathode through a scalable, room-temperature, one-step bottom-up approach. *Proceedings of the National Academy of Sciences USA* **2013**, *110*, 7148–7153.
- 54 Seh, Z. W.; † **Li, W.**; † Cha, J.; Zheng, G; Yuan, Y.; McDowell, M. T.; Hsu, P. C.; Cui, Y. Sulfur-TiO₂ yolk-shell nanoarchitecture with internal void space for long-cycle lithium-sulfur batteries. *Nature Communications* **2013**, *4*, 1331. (†Co-first author)
- 53 **Li, W.**; Zhang, Q.; Zheng, G; Seh, Z. W.; Yao, H.; Cui, Y. Understanding the role of different conductive polymers in improving the nanostructured sulfur cathode performance. *Nano Letters* **2013**, *13*, 5534–5540.
- 52 Xia, Y.*; **Li, W.**; Copley, C. M.; Chen, J.; Xia, X.; Zhang, Q.; Yang, M.; Cho, E. C.; Brown, K. P.; Gold nanocages: from synthesis to theranostic applications. *Accounts of Chemical Research* **2011**, *44*, 914–924. (Invited review article, highlighted in *Chemical & Engineering News*, September 26, 2011, pp. 29–32) (*Corresponding author)
- 51 **Li, W.**; Brown, P.; Wang, L. V.; Xia, Y. Gold nanocages as contrast agents for photoacoustic imaging. *Contrast Media & Molecular Imaging* **2011**, *6*, 370–377. (Invited review article)
- 50 **Li, W.**; Cai, X.; Kim, C.; Sun, G.; Zhang, Y.; Deng, R.; Yang, M.; Chen, J.; Achilefu, S.; Wang, L. V.; Xia, Y. Gold nanocages covered with thermally-responsive polymers for controlled release by high-intensity focused ultrasound. *Nanoscale* **2011**, *3*, 1724–1730.
- 49 Cai, X.; † **Li, W.**; † Kim, C.; Yuan, Y.; Wang, L. V.; Xia, Y. *In vivo* quantitative evaluation of the transport kinetics of gold nanocages in a lymphatic system by noninvasive photoacoustic tomography. *ACS Nano* **2011**, *5*, 9658–9667. (†Co-first author)
- 48 **Li, W.**; Camargo, P. H. C.; Au, L.; Zhang, Q.; Rycenga, M.; Xia, Y. Etching and dimerization: A simple and versatile route to dimers of silver nanospheres with a range of sizes. *Angewandte Chemie International Edition* **2010**, *49*, 164–168 (VIP article, highlighted in an accompanying perspective article).
- 47 **Li, W.**; Xia, Y. Facile synthesis of gold octahedra by direct reduction of HAuCl₄ in an aqueous solution. *Chemistry-An Asian Journal* **2010**, *5*, 1312–1316.

- 46 Zhang, Q.;[†] **Li, W.**;[†] Moran, C.; Chen, J.; Wen, L.; Xia, Y. Seed-mediated synthesis of Ag nanocubes with controllable edge lengths in the range of 30-200 nm and comparison of their optical properties. *Journal of the American Chemical Society* **2010**, *132*, 11372–11378. ([†]Co-first author)
- 45 **Li, W.**; Camargo, P. H. C.; Lu, X.; Xia, Y. Dimers of silver nanospheres: Facile synthesis and their use as hot spots for surface-enhanced Raman scattering. *Nano Letters* **2009**, *9*, 485–490.
- 44 Yavuz, M. S.;[†] **Li, W.**;[†]; Xia, Y. Facile synthesis of gold icosahedra in an aqueous solution by reacting H₂AuCl₄ with N-vinyl pyrrolidone. *Chemistry-A European Journal* **2009**, *15*, 13181–13187. ([†]Co-first author)
- 43 **Li, W.**; Li, C.; Ma, H.; Chen, J. Magnesium nanowires with enhanced kinetics for hydrogen absorption and desorption. *Journal of the American Chemical Society* **2007**, *129*, 6710–6711.
- 42 **Li, W.**; Li, C.; Zhou, C.; Ma, H.; Chen, J. Metallic magnesium nano/mesoscale structures: Their shape-controlled preparation and Mg/air battery applications. *Angewandte Chemie International Edition* **2006**, *45*, 6009–6012.
- 41 **Li, W.**; Cheng, F.; Tao, Z.; Chen, J. Vapor-transportation preparation and reversible lithium intercalation/deintercalation of α -MoO₃ microrods. *The Journal of Physical Chemistry B* **2006**, *110*, 119–124.
- 40 **Li, W.**; Xu, L.; Chen, J. Co₃O₄ nanomaterials in lithium-ion batteries and gas sensors. *Advanced Functional Materials* **2005**, *15*, 851–857.
- 39 **Li, W.**; Zhang, S.; Chen, J. Synthesis, characterization and electrochemical application of Ca(OH)₂, Co(OH)₂ and Y(OH)₃-coated Ni(OH)₂ tubes. *The Journal of Physical Chemistry B* **2005**, *109*, 14025–14032.
- 38 **Li, W.**; Cai, F.; Gou, X.; Gao, F.; Chen, J. Synthesis, characterization and electrochemical properties of Ni(OH)₂ nanotubes. *Acta Chimica Sinica* **2005**, *63*, 411–415.
- 37 Tao, X.; Wang, J.; Liu, C.; Wang, H.; Yao, H.; G. Zheng, Seh, Z. W.; Cai, Q.; **Li, W.**; Zhou, G.; Zu, C.; Cui, Y. "Balancing surface adsorption and diffusion of lithium-polysulfides on nonconductive oxides for lithium-sulfur battery design", *Nature Communications* **2016**, *7*, 11203.
- 36 Sun, Y.; Yao, H.; **Li, W.**; Seh, Z. W.; Zheng, G; Cui, Y. In-Operando Optical Imaging of Temporal and Spatial Distribution of Polysulfides in Lithium-Sulfur Batteries. *Nano Energy* **2015**, *11*, 579–586.
- 35 Lu, Z.; Liu, N.; Lee, H.-W.; Zhao, J.; **Li, W.**; Li, Y.; Cui, Y. Nonfilling Carbon Coating of Porous Silicon Micrometer-Sized Particles for High-Performance Lithium Battery Anodes. *ACS Nano* **2015**, *9*, 2540.
- 34 Liu, C.; Hsu, P.-C.; Lee, H.-W.; Ye, M.; Zheng, G.; Liu, N.; **Li, W.**; Cui, Y. Transparent air filter for high-efficiency PM_{2.5} capture. *Nature Communications* **2015**, *6*, 6205.
- 33 Liang, Z.; Zheng, G.; Liu, C.; Liu, N.; **Li, W.**; Yan, K.; Yao, H.; Hsu, P.-C.; Chu, S.; Cui, Y. Polymer Nanofiber-Guided Uniform Lithium Deposition for Battery Electrodes. *Nano Letters* **2015**, *15*, 2910–2916.
- 32 Liu, N.; **Li, W.**; Pasta, M.; Cui, Y. Nanomaterials for electrochemical energy storage. *Frontiers of Physics* **2014**, *9*, 323–350.
- 31 Seh, Z. W.; Yu, J. H.; **Li, W.**; Hsu, P.-C.; Wang, H.; Sun, Y.; Yao, H.; Zhang, Q.; Cui, Y. Two-dimensional layered transition metal disulphides for effective encapsulation of high-capacity lithium sulphide cathodes. *Nature Communications* **2014**, *5*, 5017.
- 30 Liang, Z.; Zheng, G.; **Li, W.**; Seh, Z. W.; Yao, H.; Yan, K.; Kong, D.; Cui, Y. Sulfur cathodes with hydrogen reduced titanium dioxide inverse opal structure. *ACS Nano* **2014**, *8*, 5249–5256.
- 29 Yao, H.; Yan, K.; **Li, W.**; Zheng, G; Kong, D.; Seh, Z. W.; Narasimhan, V. K.; Zheng, L.; Cui, Y. Improved lithium-sulfur batteries with a conductive coating on the separator to

- prevent the accumulation of inactive S-related species at the cathode-separator interface. *Energy & Environmental Science* **2014**, *7*, 3381–3389.
- 28 Zheng, G.; Lee, S. W.; Liang, Z.; Lee, H.-Y.; Yan, K.; Yao, H.; Wang, H.; **Li, W.**; Chu, S.; Cui, Y. Interconnected hollow carbon nanospheres for stable lithium metal anodes. *Nature Nanotechnology* **2014**, *9*, 618–623.
- 27 Yao, H.; Zheng, G.; Hsu, P. C.; Kong, D.; Cha, J. J.; **Li, W.**; Seh, Z. W.; McDowell, M. T.; Yan, K.; Liang, Z.; Narasimhan, V. K.; Cui, Y. Improving lithium-sulphur batteries through spatial control of sulphur species deposition on a hybrid electrode surface. *Nature Communications* **2014**, *5*, 3943.
- 26 Seh, Z. W.; Wang, H.; Hsu, P. C.; Zhang, Q.; **Li, W.**; Zheng, G.; Yao, H.; Cui, Y. Facile Synthesis of Li₂S-polypyrrole composite structures for high-performance Li₂S cathodes. *Energy and Environmental Science* **2014**, *7*, 672–676.
- 25 Seh, Z. W.; Wang, H.; Liu, N.; Zheng, G.; **Li, W.**; Yao, H.; Cui, Y. High-capacity Li₂S-graphene oxide composite cathodes with stable cycling performance. *Chemical Science* **2014**, *5*, 1369–1400.
- 24 Yao, H.; Zheng, G.; **Li, W.**; McDowell, M. T.; Seh, Z. W.; Liu, N.; Lu, Z.; Cui, Y. Crab shells as sustainable templates from nature for nanostructured battery electrodes. *Nano Letters* **2013**, *13*, 3385–3390.
- 23 Seh, Z. W.; Zhang, Q.; **Li, W.**; Zheng, G.; Yao, H.; Cui, Y. Stable cycling of lithium sulfide cathodes through strong affinity with a bifunctional binder. *Chemical Science* **2013**, *4*, 3673–3677.
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- 21 Xia, X.; **Li, W.**; Zhang, Y.; Xia, Y. Silica-coated dimers of silver nanospheres as SERS tags for imaging cancer cells. *Interface Focus* **2013**, *3*, 20120092.
- 20 Wang, Y.; Black, K.C.; Luehmann, H.; **Li, W.**; Zhang, Y.; Cai, X.; Wan, D.; Liu, S.-Y.; Li, M.; Kim, P.; Li, Z.-Y.; Wang, L. V.; Liu, Y.; Xia, Y. Comparison study of gold nano-hexapods, nanorods, and nanocages for photothermal cancer treatment. *ACS Nano* **2013**, *7*, 2068–2077.
- 19 Zhang, H.; **Li, W.**; Jin, M.; Zeng, J.; Yu, T.; Yang, D.; Xia, Y. Controlling the morphology of rhodium nanocrystals by manipulating the growth kinetics with a syringe pump. *Nano Letters* **2011**, *11*, 898–903.
- 18 Kim, D. Y.; **Li, W.**; Ma, Y.; Yu, T.; Li, Z. -Y.; Park, O. O.; Xia Y. Seed-mediated synthesis of gold octahedra in high purity, and with well-controlled sizes and optical properties. *Chemistry-A European Journal* **2011**, *17*, 4759–4764. (VIP article)
- 17 Zhang, H.; Jin, M.; Wang, J.; **Li, W.**; Camargo, P. H. C.; Kim, M.; Yang, D.; Xie, Z. and Xia, Y. Synthesis of Pd-Pt bimetallic nanocrystals with a concave structure through a bromide-induced galvanic replacement reaction. *Journal of the American Chemical Society* **2011**, *133*, 6078–6089.
- 16 Moon, G. D.; Choi, S. -W.; Cai, X.; **Li, W.**; Cho, E. C.; Jeong, U.; Wang, L. V.; Xia Y. A new theranostic system based on gold nanocages and phase-change materials with unique features for photoacoustic imaging and controlled release. *Journal of the American Chemical Society* **2011**, *133*, 4762–4765.
- 15 Rycenga, M.; Cobley, C. M.; Zeng, J.; **Li, W.**; Moran, C.; Zhang, Q.; Qin, D.; Xia, Y. Controlling the synthesis and assembly of silver nanostructures for plasmonic applications. *Chemical Reviews* **2011**, *111*, 3669–3712. (Invited review article)
- 14 Zeng, J.; Tao, J.; **Li, W.**; Grant, J.; Zhu, Y. and Xia, Y. A mechanistic study on the formation of silver nanoplates in the presence of silver seeds and citric acid or citrate ions. *Chemistry-An Asian Journal* **2011**, *6*, 376–379.

- 13 Ma, Y.; **Li, W.**; Cho, E. C.; Li, Z.; Yu, T.; Zeng, J.; Xie, Z.; Xia, Y. Au@Ag core-shell nanocubes with finely tuned and well-controlled sizes, shell thicknesses, and optical properties. *ACS Nano* **2010**, *4*, 6725–6734.
- 12 Zhang, Q.; **Li, W.**; Wen, L.-P.; Chen, J.; Xia, Y. Facile synthesis of Ag nanocubes of 30 to 70 nm in edge length with CF₃COOAg as a precursor. *Chemistry-A European Journal* **2010**, *16*, 10234–10239.
- 11 Ma, Y.; **Li, W.**; Zeng, J.; McKiernan, M.; Xie, Z.; Xia, Y. Synthesis of small silver nanocubes in a hydrophobic solvent by introducing oxidative etching with Fe(III) species. *Journal of Materials Chemistry* **2010**, *20*, 3586–3589.
- 10 Zhang, H.; Xia, X.; **Li, W.**; Zeng, J.; Dai, Y.; Yang, D.; Xia, Y. Facile synthesis of five-fold twinned, starfish-like rhodium nanocrystals by eliminating oxidative etching with a chloride-free precursor. *Angewandte Chemie International Edition* **2010**, *49*, 5296–5300. (Highlighted in *Nature Materials*, **2010**, *9*, 605)
- 9 Ma, Y.; Zeng, J.; **Li, W.**; McKiernan, M.; Xie, Z.; Xia, Y. Seed-mediated synthesis of truncated gold decahedrons with the AuCl/oleylamine complex as a precursor. *Advanced Materials* **2010**, *22*, 1930–1934.
- 8 Camargo, P. H. C.; Au, L.; Rycenga, M.; **Li, W.**; Xia, Y. Measuring the SERS enhancement factors of dimers with different structures constructed from silver nanocubes. *Chemical Physics Letters* **2010**, *484*, 304–308.
- 7 Dai, Y.; Lim, B.; Yang, Y.; Cobley, C. M.; Cho, E. C.; **Li, W.**; Grayson, B.; Fanson, P. T.; Campbell, C. T. and Xia, Y. A sinter-resistant catalytic system based on Platinum nanoparticles supported on TiO₂ nanofibers and covered by porous silica. *Angewandte Chemie International Edition* **2010**, *49*, 8165–8168. (VIP article)
- 6 Rycenga, M.; Camargo, P. H. C.; **Li, W.**; Moran, C.; Xia, Y. Understanding the SERS effects of single silver nanoparticles and their dimers, one at a time. *The Journal of Physical Chemistry Letters* **2010**, *1*, 696–703. (Invited perspective article)
- 5 Li, Z.; **Li, W.**; Camargo, P. H. C.; Xia, Y. Facile synthesis of branched Au nanostructures by templating against a self-destructive lattice of magnetic Fe nanoparticles. *Angewandte Chemie International Edition* **2008**, *47*, 9653–9656.
- 4 Li, Y.; **Li, W.**; Chou, S.; Chen, J. Synthesis, characterization and electrochemical properties of aluminum-substituted alpha-Ni(OH)₂ hollow spheres. *Journal of Alloys and Compounds* **2008**, *456*, 339–343.
- 3 Li, X.; **Li, W.**; Chen, J. Electrochemical lithium intercalation/deintercalation of single-crystalline V₂O₅ nanowires. *Journal of the Electrochemical Society* **2007**, *154*, 1, A39–A42.
- 2 Zhang, S.; **Li, W.**; Li, C.; Chen, J. Synthesis, characterization, and electrochemical properties of Ag₂V₄O₁₁ and AgVO₃ 1-D nano/microstructures. *The Journal of Physical Chemistry B* **2006**, *110*, 24855–24863.
- 1 Chen, J.; Xu, L.; **Li, W.**; Gou, X. α-Fe₂O₃ nanotubes in gas sensor and lithium-ion battery applications. *Advanced Materials* **2005**, *17*, 582–586.

PATENTS

- **Li, W.**; Cui, Y.; Seh, Z. W.; Zheng, G; Yuan, Y. Encapsulated sulfur cathodes for rechargeable lithium batteries, *US Patent: US20130065128A1*.
- Chen, J.; **Li, W.**; Cai, F.; Gou, X; Gao, F. Preparation method of nickel hydroxide nanotube, *Chinese Patent: CN1267357 C*.
- Zhang, S.; **Li, W.**; Chen, J.; Tao, Z.; Ma, H. Vanadate silver electrode material and preparation method and its application, *Chinese Patent: CN1913202 B*.
- Chen, J.; Li, C.; Zhou, C.; Ma, H.; **Li, W.** Magnesium negative material and preparation method and application, *Chinese Patent: CN1913219 A*.

CONFERENCE PRESENTATIONS

- **Li, W.**, Tactical Tunings of the Electrode-Electrolyte Interface in Enabling Highly Stable Sodium Metal Anode, presented at the 256th ACS National Meeting & Exposition, Boston, Massachusetts, USA, August 19-23, 2018; *Invited Talk*.
- **Li, W.**, Tackling the problems of lithium-sulfur battery: from molecular understanding to nanomaterials design, presented at 4th EITA Young Investigator Conference, Massachusetts Institute of Technology, Cambridge, MA, USA, August 6-7, 2015; *Invited Talk*.
- **Li, W.**; Seh, Z. W.; Zheng, G.; Zhang, Q.; Yao, H.; Yang Y.; Cui, Y., High-performance lithium-sulfur battery: from molecular understanding to nanomaterials design, presented at 248th ACS National Meeting, San Francisco, CA, USA, August 10-14, 2014; *Oral 265*.
- **Li, W.**; Cui, Y., Understanding the role of different conductive polymers in improving the nanostructured sulfur cathode performance, presented at 2014 MRS Spring Meeting, San Francisco, CA, USA, April 21-25, 2014; *Oral 09.07*.
- **Li, W.**; Cui, Y., Monodisperse polymer-encapsulated hollow sulfur nanosphere cathode for high-energy lithium-sulfur batteries with long cycle life, presented at 2013 MRS Spring Meeting, San Francisco, CA, USA, April 1-5, 2013; *Oral E5.09*.
- **Li, W.**; Xia, Y., Dimers of Ag nanospheres for surface-enhanced Raman scattering, presented at 241st ACS National Meeting, Anaheim, CA, USA, March 27-31, 2011; *Poster 312*.
- **Li, W.**; Xia, Y., Dimers of silver nanospheres: Facile synthesis and application in surface-enhanced Raman scattering, presented at 2010 MRS Fall Meeting, Boston, MA, USA, November 30-December 2, 2010; *Poster M10.14*.
- **Li, W.**; Camargo, P. H. C.; Lu, X.; Xia, Y., Dimers of silver nanospheres as hot spots for surface-enhanced Raman scattering, presented at 2009 MRS Spring Meeting, San Francisco, CA, USA, April 13-17, 2009; *Oral Y7.8, Graduate Student Presentation Award*.
- **Li, W.**; Cheng, F. Y.; Chou, S. L.; Li, C. S.; Chen, J., 1-D nickel hydroxide nanomaterials: synthesis and synthesis and application in alkaline rechargeable batteries, presented at 25th Chinese Chemical Society Congress, Changchun, China, July 11-14, 2006; *Oral 06-0-029*.