

YAT LI

Associate Professor
Department of Chemistry and Biochemistry,
University of California, Santa Cruz
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Education and Training

2003 – 2007 Postdoctoral Research in Physical Chemistry, Harvard University, Cambridge, MA
2002 Ph.D. in Inorganic Chemistry, University of Hong Kong, Hong Kong
1999 B.Sc. in Chemistry, University of Hong Kong, Hong Kong

Research and Professional Experience

2013-present Associate Professor, University of California, Santa Cruz, CA
2007-2013 Assistant Professor, University of California, Santa Cruz, CA
2003-2007 Postdoctoral Research Fellow, Harvard University, Cambridge, MA
2002-2003 Research Associate, University of Hong Kong, Hong Kong
1999-2002 Graduate Research, University of Hong Kong, Hong Kong

Awards, Honors and Memberships

2017 2017 Highly Cited Researcher (Clarivate Analytics)
2009-2014 U.S. National Science Foundation CAREER Award
2009-2011 Senior Visiting Scholar Fellowship, Fudan University, China
2008-2010 Visiting Scientist Fellowship, National Center for Electron Microscopy, Lawrence Berkeley National Laboratory
2003-2005 Croucher Foundation Postdoctoral Fellowship, Croucher Foundation, Hong Kong
2002 Sir Edward Youde Memorial Fellowship, Sir Edward Youde Memorial Fund, Hong Kong
2002 Li Po Chun Postgraduate Scholarship, University of Hong Kong

Funding

Award Period	Project Title	Sponsor	Role	Award Amount (\$)
2017-2018	Bridging education and research: Innovative nanomaterial platforms for energy and sensing	University of California, Merced (NASA Center Grant)	Co-PI	88,000
2017-2018	Extraction of Rare Earth Metals from Geothermal Fluids using Bioengineered Microbes	Lawrence Livermore National Security LLC	Co-PI	50,000
2016-2018	3D Printing of Carbon Structures with Multi-Scale Pore Network	Lawrence Livermore National Security LLC	Co-PI	160,000
2016-2017	Self-Sustained Microbial Photochemical Systems for Wastewater-to-Chemical Fuel Conversion	UCSC (COR-SRG)	PI	8,000
2015-2016	I-Corps: Microbial Photo-electrochemical Hybrid System for Wastewater Treatment and Hydrogen Generation	National Science Foundation	PI	50,000
2015-2016	A mechanistic study of nickel based catalysts for sustainable hydrogen fuel production	UCSC (COR-FRG)	PI	1,500
2014-2015	Investigation of Plasmon-Enhanced Visible Light Photoactivity of Titanium Dioxide Photoelectrodes for Solar Water Oxidation	UC-MEXUS	Lead-PI	14,050
2013-2014	Photo-induced polymerization: Interaction between monomers and metal oxide nanostructures	UCSC (COR-FRG)	PI	2,000
2012-2013	Development of Chemically-Modified TiO ₂ Nanowire Arrays for Dye-Sensitized Solar	UCSC (COR-FRG)	PI	2,000

	Cells			
2011-2012	Solar-powered microbial electrolysis cells for hydrogen production	Lawrence Livermore National Security LLC	Co-PI	40,000
2010-2014	Collaborative Research: Development of self-biased solar microbial electrolysis cells	National Science Foundation	Lead-PI	214,500
2010-2012	Visiting Scholar Grant	Fudan University	PI	7,000
2009-2014	CAREER: III-nitrides nanowire superlattice for nanoscale laser diodes	National Science Foundation	PI	400,000
2008-2009	Development of InGaN NW hetero-structure arrays for high photovoltaic cells	University of California Energy Institute	PI	35,000
2008-2009	Development of Small-diameter InSb NWs for Thermoelectric Power Generation	UCSC (COR-SRG)	PI	15,000
2007-2008	Development of InGaN NW heterostructure arrays for high-efficiency photovoltaic cells	Stanford Nanofabrication Facility (Stanford University)	PI	5,000
			Total	1,092,050

Publications (<http://scholar.google.com/citations?user=7LTJBnUAAA&hl=en>), Citation: >17000; h-index: 53

- Kou T., Smart T., Yao B., Chen I., Thota D., Ping Y.*, Li Y.* Theoretical and Experimental Insight into the Effect of Nitrogen Doping on Hydrogen Evolution Activity of Ni₃S₂ in Alkaline Medium, *Adv. Energy Mater.*, accepted
- Huang L., Yao X., Yuan L., Yao B., Gao X., Wan J., Zhou P., Xu M., Wu J., Yu H., Hu Z., Li T., Li Y., Zhou J.* 4-Butylbenzenesulfonate Modified Polypyrrole Paper for Supercapacitor with Exceptional Cycling Stability, *Energy Storage Mater.*, accepted
- Song Y., Liu T., Qian F., Zhu C., Yao B., Duoss E., Spadaccini C., Worsley M.*, Li Y.* Three-dimensional Carbon Architectures for Electrochemical Capacitors, *J. Colloid Interf. Sci.*, 509, 529-545 (2018). [Feature Article, Cover]
- Forster M., Potter R. J., Yang Y., Li Y., Cowan A. J.* Stable Ta₂O₅ overlayers on α -Fe₂O₃ can enhance photoelectrochemical water splitting efficiencies, *ChemPhotoChem*, DOI: 10.1002/cptc.201700156 (2017)
- Song Y., Qin Z., Huang Z., Liu T., Li Y., Liu X. X.* Nitrogen-Doped Carbon "Spider Webs" Derived From Pyrolysis of Polyaniline Nanofibers in Ammonia for Capacitive Energy Storage, *J. Mater. Res.*, DOI: <https://doi.org/10.1557/jmr.2017.443> (2017).
- Huang Z., Liu T., Song Y., Li Y.*, Liu X.X.* Balancing the Electrical Double Layer Capacitance and Pseudocapacitance of Hetero-atom Doped Carbon, *Nanoscale*, 9, 13119-13127 (2017)
- Liu T., Zhang F., Song Y., Li Y.* Revitalizing Carbon Supercapacitor Electrodes with Hierarchical Porous Structures, *J. Mater. Chem. A*, 5, 17705-17733 (2017)
- Kou T., Yao B., Liu T., Li Y.* Recent Advances in Chemical Methods for Activating Carbon and Metal Oxide Based Electrodes for Supercapacitors, *J. Mater. Chem. A*, 5, 17151-17173 (2017)
- Song Y., Liu T., Yao B., Li M., Kou T., Huang Z., Feng D., Wang F., Tong Y., Liu X.,* Li Y.* Ostwald Ripening Improves Rate Capability of High Mass Loading Manganese Oxide for Supercapacitors, *ACS Energy Lett.*, 2, 1752-1759 (2017). (Top 20 most downloaded articles in *ACS Energy Lett.* in 2017/7)
- Yang Y., Liu T., Wang H., Zhu X.,* Ye D., Liao Q., Liu K., Chen S., Li Y.* Reduced Graphene Oxide Modified Activated Carbon for Improving Power Generation of Air-Cathode Microbial Fuel Cells, *J. Mater. Res.*, accepted.
- Zhu C., Liu T., Qian F., Chen W., Chandrasekaran S., Yao B., Song Y., Duoss E., Kuntz J., Spadaccini C., Worsley M.,* Li Y.* 3D Printed Functional Nanomaterials for Electrochemical Energy Storage, *Nano Today*, DOI: 10.1016/j.nantod.2017.06.007
- Lu B., Yao B., Roseman G., Deming C., Lu J., Millhauser G., Li Y., Chen S.* Ethanol oxidation reaction catalyzed by palladium nanoparticles supported on hydrogen-treated TiO₂ nanobelts: Impacts of oxygen vacancies, *ChemElectroChem*, 4, 1-8 (2017)
- Railey P., Song Y., Liu T.*, Li Y.* Metal Organic Frameworks with Immobilized Nanoparticles: Synthesis and Applications in Photocatalytic Hydrogen Generation and Energy Storage, *Mater. Res. Bull.*, 96, 385-394 (2017)
- Yang Y., Niu S., Han D., Liu T., Wang G.*, Li Y.* Progress in Developing Metal Oxide Nanomaterials for Photoelectrochemical Water Splitting, *Adv. Energy Mater.*, 1700555 (2017)
- Zhang F., Liu T., Li M., Yu M., Yang L., Tong Y., Li Y.* Multi-scale Pore Network Boosts Capacitance of Carbon Electrodes for Ultrafast Charging, *Nano Lett.*, 17, 3097-3104 (2017)
- Yao B., Zhang J., Kou T., Song Y., Liu T., Li Y.* Paper-based Electrodes for Flexible Energy Storage Devices, *Adv. Sci.*, 4, 1700107 (2017) [cover]

17. Li M., Yang Y., Ling Y., Qiu W., Wang F., Liu T., Song Y., Liu X., Fang P., Tong Y.*, Li Y.* Morphology and Doping Engineering of Sn-Doped Hematite Nanowire Photoanodes, *Nano Lett.*, 17, 2490-2495 (2017).
18. Wang G.*, Yang Y., Han D., Li Y.* Oxygen Defective Metal Oxides for Energy Conversion and Storage, *Nano Today*, 13, 23-39 (2017)
19. Song Y., Liu T., Feng D., Yao B., Kou T., Liu X.*, Li Y.* Amorphous Mixed-valence Vanadium Oxide/Exfoliated Carbon Cloth Structure Shows a Record High Cycling Stability, *Small*, 13, 1700067 (2017) (Top 10 most accessed articles in Small in 2017/2)
20. Yang Y., Liu T., Liao Q., Ye D.*, Zhu X., Li J., Zhang P., Peng Y., Chen S., Li Y.* A Three-dimensional Nitrogen-doped Graphene Aerogel-Activated Carbon Composite Catalyst Enables Low-cost Microfluidic Microbial Fuel Cells with Superior Performance, *J. Mater. Chem. A*, 4, 15913-15919 (2016) [Cover]
21. Cooper J., Scott S., Ling Y., Yang J., Hao S., Li Y., Toma F., Stutzmann M., Lakshmi K., Sharp I.* The Role of Hydrogen in Defining the n-Type Character of BiVO₄ Photoanodes, *Chem. Mater.*, 28, 5761-5771 (2016)
22. Zhang F., Liu T., Hou G., Kou T., Yue L., Guan R., Li Y.* Hierarchical Porous Carbon Foam for Electrical Double Layer Capacitors, *Nano Res.*, 9, 2875-2888 (2016)
23. Luo B., Pu Y. C., Lindley S., Yang Y., Li L., Li Y., Li X.*, Zhang J. Z.* Organolead Halide Perovskite Nanocrystals: Branched Capping Ligands Control Crystal Size and Stability, *Angew. Chem. Int. Ed.*, 55, 8864-8868 (2016)
24. Liu T., Zhu C., Kou T., Worsley M., Qian F., Condes C., Duoss E., Spadaccini C., Li Y.* Ion Intercalation Induced Capacitance Improvement for Graphene-based Supercapacitor Electrodes, *ChemNanoMat*, 2, 635-641 (2016) [Cover]
25. Liu T., Li Y.* Photocatalysis: Plasmonic Solar Desalination, *Nat. Photon.*, 10, 361-362 (2016) (News & Views)
26. Song Y., Liu T., Xu G., Feng D., Yao B., Kou T., Liu X.*, Li Y.* Tri-layered Graphite Foil for Electrochemical Capacitors, *J. Mater. Chem. A*, 4, 7683-7688 (2016)
27. Yao B., Huang L., Zhang J., Gao X., Wu J., Cheng Y., Xiao X., Wang B., Li Y.* and Zhou J.* Flexible Transparent Molybdenum Trioxide Nanopaper for Energy Storage, *Adv. Mater.*, 30, 6353-6358 (2016)
28. Yang Y., Liu T., Zhu X.*, Zhang F., Ye D., Liao Q., Li Y.* Boosting Power Density of Microbial Fuel Cells with Three-dimensional Nitrogen-doped Graphene Aerogel Electrode, *Adv. Sci.*, 3, 1600097 (2016)
29. Rex R., Yang Y., Knorr F., Zhang J. Z., Li Y. and McHale J.* Spectroelectrochemical Photoluminescence of Trap States in H-treated Rutile TiO₂ Nanowires: Implications for Photooxidation of Water, *J. Phys. Chem. C*, 120, 3530-3541 (2016)
30. Wang G., Yang Y., Ling Y., Wang H., Lu X., Pu Y., Zhang J. Z., Tong Y. and Li Y.* An Electrochemical Method to Enhance the Performance of Metal Oxides for Photoelectrochemical Water Oxidation, *J. Mater. Chem. A*, 4, 2849-2855 (2016)
31. Zhu C., Liu T., Qian F., Han T., Duoss E., Kuntz J., Spadaccini C., Worsley M.*, Li Y.* Supercapacitors Based on 3D Hierarchical Graphene Aerogels with Periodic Macropores, *Nano Lett.*, 16, 3448-3456 (2016) [Cover]
32. Yang Y., Forster M., Ling Y., Wang G., Zhai T., Tong Y., Cowan A. J.* and Li Y.* Acid Treatment Enables Suppression of Electron-Hole Recombination in Hematite for Photoelectrochemical Water Splitting, *Angew. Chem. Int. Ed.*, 128, 3464-3468 (2016)
33. Luo B., Pu Y., Yang Y., Lindley S., Abdelmageed G., Ashry H., Li Y., Li X., Zhang J.* Synthesis, optical properties, and exciton dynamics of organolead bromide perovskite nanocrystals, *J. Phys. Chem. C*, 119, 26672-26682 (2015)
34. Yang Y., Ling Y., Wang G., Liu T., Wang F., Zhai T., Tong Y., Li Y.* Photo-hole Induced Corrosion of Titanium Dioxide: Mechanism and Solutions, *Nano Lett.*, 15, 7051-7057 (2015)
35. Song Y., Liu T., Xu X., Feng D., Li Y.* and Liu X.* Pushing the Cycling Stability Limit of Polypyrrole for Supercapacitors, *Adv. Funct. Mater.*, 25, 4626-4632 (2015)
36. Forster M., Potter R. J., Klug D. R., Ling Y., Yang Y., Li Y. and Cowan A. J.* Oxygen Deficient α -Fe₂O₃ Photoelectrodes: A Balance Between Enhanced Electrical Properties and Trap-Mediated Losses, *Chem. Sci.*, 6, 4009-4016 (2015)
37. Zhai T., Lu X., Wang H., Wang G., Mathis T., Liu T., Li C., Tong Y.* and Li Y.* An electrochemical capacitor with applicable energy density of 7.4 Wh/kg at average power density of 3000 W/kg, *Nano Lett.*, 15, 3189-3194 (2015)
38. Song Y., Feng D., Liu T., Li Y.* and Liu X.* Controlled Partial-Exfoliation of Graphite Foil and Integration with MnO₂ Nanosheets for Electrochemical Capacitors, *Nanoscale*, 7, 3581-3587 (2015)
39. Liu T., Ling Y., Yang Y., Finn L., Collazo E., Zhai T., Tong Y. and Li Y.* Investigation of Hematite Nanorod-Nanoflake Morphological Transformation and the Application of Ultrathin Nanoflakes for Electrochemical Devices, *Nano Energy*, 12, 169-177 (2015)

40. Ling Y. and Li Y.* A Review of Sn-Doped Hematite Nanostructures for Photoelectrochemical Water Splitting, *Particle & Particle Systems Characterization*, 11, 1113-1121 (2014)
41. Zhang Q., Li G., Liu X., Qian F., Li Y., Sum T. C., Lieber C. M.* and Xiong Q. H.* A Room-temperature Low-threshold Ultra-violet Plasmonic Nanolaser, *Nature Commun.*, 5, 4953 (2014)
42. Pu Y. C., Ling Y., Chang K. D., Liu C. M., Zhang J. Z., Hsu Y. J.* and Li Y.* Surface Passivation of TiO₂ Nanowires Using a Facile Precursor-Treatment Approach for Photoelectrochemical Water Oxidation, *J. Phys. Chem. C*, 118, 15086–15094 (2014)
43. Wang H., Qian F. and Li Y.* Solar-Assisted Microbial Fuel Cells for Bioelectricity and Chemical Fuel Generation, *Nano Energy*, 8, 264-273 (2014)
44. Zhai T., Lu X., Ling Y., Yu M., Wang G., Liu T., Liang C., Tong Y.* and Li Y.* A New Benchmark Capacitance for Supercapacitor Anode by Mixed-Valence Sulfur-Doped V₆O_{13-x}, *Adv. Mater.*, 26 (33), 5869-5875 (2014)
45. Qian F., Wang H., Ling Y., Wang G., Thelen M. P. and Li Y.* Photoenhanced Electrochemical Interaction between *Shewanella* and a Hematite Nanowire Photoanode, *Nano Lett.*, 14, 3688-3693 (2014)
46. Liu T., Lauren F., Yu M., Wang H., Zhai T., Lu X., Tong Y. and Li Y.* Polyaniline and Polypyrrole Pseudocapacitor Electrodes with Excellent Cycling Stability, *Nano Lett.*, 14, 2522–2527 (2014)
47. Lu X., Yu M., Wang G., Tong Y.* and Li Y.* Flexible Solid-State Supercapacitors: Design, Fabrication and Applications, *Energy Environ. Sci.*, 7, 2160-2181 (2014)
48. Bai M. H., Liu T., Luan F., Li Y.* and Liu X. X.* Electro-codeposition of Vanadium Oxide-Polyaniline Composite Nanowire Electrodes for High Energy Density Supercapacitors, *J. Mater. Chem. A*, 2, 10882-10888 (2014)
49. Wang G., Wang H., Lu X., Ling Y., Yu M., Zhai T., Tong Y. and Li Y.* Solid-State Supercapacitor Based on Activated Carbon Cloths Exhibits Excellent Rate Capability, *Adv. Mater.*, 26, 2676-2682 (2014)
50. Pascall A. J.*, Qian F., Wang G., Worsley M. A., Li Y. and Kuntz J. D. Light-Directed Electrophoretic Deposition: A New Additive Manufacturing Technique for Arbitrarily Patterned 3D Composites, *Adv. Mater.*, 26, 2252-2256 (2014)
51. Ling Y., Wang G. Wang H. Yang Y. and Li Y.* Low Temperature Activation of Hematite Nanowires for Photoelectrochemical Water Oxidation, *ChemSusChem*, 7, 848-853 (2014)
52. Lu X., Liu T., Zhai T., Wang G., Yu M., Xie S., Ling Y., Liang C., Tong Y.* and Li Y.* Improving Cycling Stability of Metal Nitride Supercapacitor Electrodes with a Thin Carbon Shell, *Adv. Energy Mater.*, 4, 1300994 (2014)
53. Yang Y., Ling Y., Wang G. and Li Y.* The Effect of Hydrogenation Temperature on TiO₂ Nanostructures for Photoelectrochemical Water Oxidation, *Eur. J. Inorg. Chem.*, 760-766 (2014)
54. Wang G., Ling Y., Wang H., Lu X. and Li Y.* Chemically Modified Nanostructures for Photoelectrochemical Water Splitting, *J. Photochem. Photobiol. C*, 19, 35-51 (2014)
55. Pesci F. M., Wang G., Klug D. R., Li Y. and Cowan A. J.* Efficient Suppression of Electron-hole Recombination in Oxygen Deficient Hydrogen Treated TiO₂ Nanowires for Photoelectrochemical Water Splitting, *J. Phys. Chem. C*, 117, 25837–25844 (2013)
56. Wheeler D. A., Ling Y., Dillon R. J., Fitzmorris R. C., Dudzik, C. G., Zavodivker, L., Rajh, T., Dimitrijevic N. M., Millhauser G., Bardeen C., Li Y.* and Zhang J. Z.* Probing the Nature of Bandgap States in Hydrogen-Treated TiO₂ Nanowires, *J. Phys. Chem. C*, 117, 26821-26830 (2013)
57. Wang H., Qian F., Wang G., Jiao Y., He Z. and Li Y.* Self-Biased Solar-Microbial Device for Sustainable Hydrogen Generation, *ACS Nano*, 7, 8728–8735 (2013)
58. Wang H., Wang G., Ling Y., Qian F., Song Y., Lu X., Chen S., Tong Y. and Li Y.* High Power Density Microbial Fuel Cell with Flexible 3D Graphene-Nickel Foam as Anode, *Nanoscale*, 5, 10283-10290 (2013)
59. Pu Y. C., Wang G., Chang K. D., Ling Y., Lin Y. K., Fitzmorris B. C., Liu C. M., Lu X., Tong Y., Zhang J. Z., Hsu Y. J.* and Li Y.* Au Nanostructure-Decorated TiO₂ Nanowires Exhibiting Photoactivity Across Entire UV-Visible Region for Photoelectrochemical Water Splitting, *Nano Lett.*, 13, 3817-3823 (2013)
60. Ling Y., Cooper J. K., Yang Y., Wang G., Munoz L., Wang H., Zhang J. Z.* and Li Y.* Chemically Modified Titanium Oxide Nanostructures for Dye-sensitized Solar Cells, *Nano Energy*, 2, 1373-1382 (2013)
61. Luan F., Wang G., Ling Y., Lu X., Wang H., Tong Y., Liu X. X.* and Li Y.* High Energy Density Asymmetric Supercapacitors with Nickel Oxide Nanoflake Cathode and 3D Reduced Graphene Oxide Anode, *Nanoscale*, 5, 7984-7990 (2013)
62. Lu X., Yu M., Zhai T., Wang G., Xie S., Liu T., Liang C., Tong Y.* and Li Y.* High Energy Density Asymmetric Quasi-Solid-State Supercapacitor Based on Porous Vanadium Nitride Nanowire Anode, *Nano Lett.*, 13, 2628-2633 (2013)
63. Wang G., Ling Y., Lu X., Qian F., Tong Y., Zhang J., Lordi V., Rocha Leao C.* and Li, Y.* Computational and Photoelectrochemical Study of Hydrogenated Bismuth Vanadate, *J. Phys. Chem. C*, 117, 10957-10964 (2013)

64. Wang G., Ling Y., Lu X., Zhai T., Qian F., Tong Y. and Li Y.* A Mechanistic Study into the Catalytic Effect of Ni(OH)₂ on Hematite for Photoelectrochemical Water Oxidation, *Nanoscale*, 5, 4129-4133 (2013)
65. Fitzmorris R., Pu Y. C., Copper J. Lin Y. F., Hsu Y. J., Li Y. and Zhang J. Z.* Optical Properties and Exciton Dynamics of Alloyed Core/Shell/Shell Cd_xZn_{1-x}Se/ZnSe/ZnS Quantum Dots, *ACS Appl. Mater. Interfaces*, 5, 2893-2900 (2013)
66. Wang G. and Li Y.* Nickel Catalyst Boosts Solar Hydrogen Generation of CdSe Nanocrystals, *ChemCatChem*, 5, 1294-1295 (2013) (Highlight)
67. Yang Y., Ling Y., Wang G., Lu X., Tong Y. and Li Y.* Growth of Gallium Nitride and Indium Nitride Nanowires on Conductive and Flexible Carbon Cloth Substrate, *Nanoscale*, 5, 1820-1824 (2013).
68. Lu X., Yu M., Wang G., Zhai T., Xie S., Ling Y., Tong Y.* and Li Y.* H-TiO₂@MnO₂/H-TiO₂@C Core-Shell Nanowires for High Performance and Flexible Asymmetric Supercapacitors, *Adv. Mater.* 25, 267-272 (2013)
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70. Lu X., Wang G., Zhai T., Yu M., Xie S., Ling Y., Liang C., Tong Y. and Li Y.* Stabilized TiN Nanowire Arrays for High-Performance and Flexible Supercapacitors, *Nano Lett.* 12, 5376-5381 (2012)
71. Wang G., Ling Y. and Li Y.* Oxygen-Deficient Metal Oxide Nanostructures for Photoelectrochemical Water Oxidation and Other Applications, *Nanoscale*, 4, 6682-6691 (2012) (Feature article)
72. Copper J. K., Ling Y., Longo C., Li Y.* and Zhang J. Z. Effects of Hydrogen Treatment and Air Annealing on Ultrafast Charge Carrier Dynamics in ZnO Nanowires Under In Situ Photoelectrochemical Conditions, *J. Phys. Chem. C*, 116, 17360-17368 (2012)
73. Wang G., Ling Y., Lu X., Wang H., Qian F., Tong Y. and Li Y.* Solar Driven Hydrogen Releasing from Urea and Human Urine, *Energy Environ. Sci.*, 5, 8215-8219 (2012)
74. Qian F., Brewster M., Lim S. K., Ling Y., Greene C., Laboutin O., Johnson J. W., Gradecak S., Cao Y. and Li Y.* Controlled synthesis of AlN/GaN Multiple Quantum Well Nanowire Structures and Their Optical Properties, *Nano Lett.*, *Nano Lett.*, 12, 3344-3350 (2012)
75. Lu X., Wang G., Xie S., Shi J., Li W., Tong Y. and Li Y.* Efficient Photocatalytic Hydrogen Evolution over Hydrogenated ZnO Nanorod Arrays, *Chem. Commun.*, 48, 7717-7719 (2012)
76. Wheeler D. A., Wang G., Ling Y., Li Y.* and Zhang J. Z. Nanostructured hematite: synthesis, characterization, charge carrier dynamics, and photoelectrochemical properties, *Energy Environ. Sci.*, 5, 6682-6702 (2012)
77. Wang G., Lu X., Zhai T., Ling Y., Wang H., Tong Y., and Li Y.* Free-Standing Nickel Oxide Nanoflake Arrays: Synthesis and Application for Highly Sensitive Non-enzymatic Glucose Sensors, *Nanoscale*, 4, 3123-3127 (2012)
78. Lu X., Wang G., Zhai T., Yu M., Gan J., Tong Y. and Li Y.* Hydrogenated TiO₂ nanotube arrays for supercapacitors, *Nano Lett.*, 12, 1690-1696 (2012)
79. Ling Y., Wang G., Reddy J., Wang C. C., Zhang J. Z. and Li Y.* Influence of oxygen content on thermal activation of hematite nanowires, *Angew. Chem. Int. Ed.*, 51, 4074-4079 (2012)
80. Wang G., Ling Y., Wang H., Yang X., Wang C. C., Zhang J. Z. and Li Y.* Hydrogen-treated WO₃ nanoflakes show enhanced photostability, *Energy Environ. Sci.*, 5, 6180-6187 (2012)
81. Wang H., Wang G., Ling Y., Lepert M., Wang C. C., Zhang J. Z. and Li Y.* Photoelectrochemical study of oxygen deficient TiO₂ nanowire arrays with CdS quantum dot sensitization, *Nanoscale*, 4, 1463-1466 (2012)
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83. Yang X., Zhang A. Y., Wheeler D. A., Bond T. C., Gu C. and Li Y.* Direct molecule specific glucose detection by Raman spectroscopy based on photonic crystal fiber, *Anal. Bioanal. Chem.* 402, 687-691 (2012)
84. Qian F. and Li Y.* Biomaterials: A natural source of nanowires, *Nature Nanotech.*, 6, 538 (2011) (news and views)
85. Wang G., Ling Y., Wheeler D., Kyle G. N., Horsley K., Heske C., Zhang J. Z. and Li Y.* Facile Synthesis of Highly Photoactive α -Fe₂O₃-Based Films for Water Oxidation, *Nano Lett.*, 11, 3503-3509 (2011)
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87. Yang X., Gu C., Qian F., Li Y. and Zhang J. Z.* Highly Sensitive Detection of Proteins and Bacteria in Aqueous Solution Using Surface-Enhanced Raman Scattering and Optical Fibers, *Anal. Chem.*, 83, 5888-5894 (2011)
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93. Wang G., Qian F., Saltikov, C. W., Jiao, Y. and Li Y.* Microbial Reduction of Graphene Oxide by *Shewanella*, *Nano Res.* 4, 563-570 (2011)
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1. Wang G., Yang Y. & Li Y. (2017) Surface Engineering of Semiconductors for Photoelectrochemical Water Splitting. In Wang D. & Cao G. (Ed.), *Nanomaterials for Energy Conversion and Storage*. Imperial College Press/World Scientific.
2. Wang G., Lu X. & Li Y. (2016) Hydrogen treated TiO₂ nanowires for charge storage and photoelectrochemical water splitting. In Chen X. & Cui Y. (Ed.), *Black TiO₂ Nanomaterials for Energy Applications*. Imperial College Press.
3. Yang Y., Pu Y., Li Y. & Zhang J. (2016) Oxygen Deficient TiO₂ Photoanode for Photoelectrochemical Water Oxidation. In Thangadurai V. & Ikuma Y. (Ed.) *Oxide Semiconductors for Solar-to-Chemical Energy Conversion*. Switzerland, Trans Tech Publications.
4. Zhang J. Z., Zhao Y. P., Li J. H. & Li Y. (2014) *Hydrogen: Generation, Storage and Utilization*. New Jersey, John Wiley & Sons, Inc.
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6. Ling Y., Damon W., Zhang J. & Li Y. (2012) Optical Properties and Applications of Hematite (α -Fe₂O₃) Nanostructures. In Zhai T. & Yao J. (Ed.), *One Dimensional Nanostructures - Principles and Applications*. New Jersey, John Wiley & Sons, Inc.
7. Li Y. (2011) One-Dimensional Metal Oxide Nanostructures for Photoelectrochemical Hydrogen Generation, In Zhou W. & Wang Z. L. (Ed.), *Three-Dimensional Nanoarchitectures: Designing Next-Generation Devices*. New York, Springer.

Patents

1. Self-biased and Sustainable Microbial Electrohydrogenesis Device (Patent#: 9825321; issue date: 11/21/2017)
2. Hydrogen-treated Semiconductor Metal Oxides for Photoelectrical Water Splitting (Patent#: 9379422; issue date: 6/28/2016)

Conference and Symposia Organization

- Symposium organizer of "Spectroscopy and Nanomaterials" in FACSS (Sept '08, 09)
- Organizing committee for Indonesian-American Kavli Frontiers of Science, Bali, Indonesia (2013)

- Symposium organizer of “Solar energy conversion and utilization” in ACS Fall meeting, Indianapolis (2013)
- Symposium organizer of “Sustainable solar energy conversion using earth-abundant materials” in MRS Fall meeting, Boston (2014)
- Symposium organizer of “Hydrogen Energy: Water Splitting and Energy Application” in MCARE 2015 conference, Jeju, Korea (2015)
- Symposium organizer of “Advances in Flexible Devices for Energy Conversion and Storage” in MRS Fall meeting, Boston (2015)

Other Professional Services

- Editorial Board Member of *Science China Chemistry* (2018 – present); Editorial Board Member of *Nano-Micro Letters* (2016 – Present)
- 2017 Guest editor of a focus issue “Porous Carbon and Carbonaceous Materials for Energy Conversion and Storage” of the *Journal of Materials Research*
- 2017 Guest editor of a themed issue “Advanced Materials for Photoelectrochemical Cells” of *Science China Materials*
- Reviewer for funding agencies, including US NSF, ACS, UC Discovery Grant, France-Berkeley Fund, ERDC, The Kentucky Science and Engineering Foundation, Hong Kong Research Grant Council, Hong Kong ITC, Binational Science Foundation, FNR Luxembourg
- Reviewer for Journals published by ACS, RSC, Wiley, Nature group, Elsevier, Cell press, US National Academy of Science, AIP, Springer
- External examiner for PhD students in The Hong Kong Polytechnic University, University of Hong Kong and Nanyang University of Technology