Kaipei Qiu

Department: School of Resources and Environmental Engineering

Professional field: Environmental Analysis

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Profile

Education

2012.09-2016.10: PhD, Department of Chemistry, University College London, UK

2010.09-2012.07: BSc, School of Environment, University of East Anglia, UK

2008.09-2012.07: BSc, Department of Environmental Science and Engineering, Fudan University

Work Experience

2019.08-Present: Associate Professor, School of Resources and Environmental Engineering, ECUST

2018.03-2019.07: Associate Professor, School of Chemistry and Molecular Engineering, ECUST

2016.11-2017.12： Research Fellow, Department of Renewable Energy, University of Exeter

Teaching

Engineering Thermodynamics (2nd year UG, compulsory)

Energy and Environment (2nd year UG, optional)

Research Field

Single Entity Environmental Analytical Chemistry

Research results and selected published papers

Awards

(1) 2019 Shanghai Sailing Program

Projects

(1) NSFC General Program, ¥650k, 2019, PI

(2) Shanghai Sailing Program, ¥200k, 2019, PI

(3) ECUST Start-up Grant, ¥500k, 2018, PI

Publications

Published 21 high-profile papers within the last five years, with total citations over 1,000.

After joining ECUST:

(21) Kaipei Qiu, Tano Patrice Fato, Bo Yuan, Yi-Tao Long*. "Toward Precision Measurement and Manipulation of Single-Molecule Reactions by a Confined Space." Small 2019, 15, 1805426.

(20) Tano Patrice Fato, Kaipei Qiu*, Yi-Lun Ying, Yi-Tao Long*. "Single Nanoparticle Electrochemistry." Annual Review of Analytical Chemistry 2019, 12, 347-370

(19) Tano Patrice Fato, Kaipei Qiu*, Li-Jun Zhao, Essy Kouadio Fodjo, Da-Wei Li, Yi-Tao Long*. "Electrocatalytic Oxidation of Tris(2-carboxyethyl)phosphine at Pyrroloquinoline Quinone Modified Carbon Nanotube through Single Nanoparticle Collision." Analytical Chemistry 2018, 90, 6059-6063.

(18) Tano Patrice Fato, Li-Jun Zhao, Essy Kouadio Fodjo, Da-Wei Li, Kaipei Qiu*, Yi-Tao Long. "Highly Sensitive and Selective Electrochemical Detection of Dopamine using Hybrid Bilayer Membranes." ChemElectroChem 2019, 6, 634-637.

(17) Kaipei Qiu*, Tano Patrice Fato, Pei-Yao Wang, Yi-Tao Long, "Real-Time Monitoring of Electrochemical Reactions on Single Nanoparticles by Dark-Field and Raman Microscopy." Dalton Transactions 2019, 48, 3809-3814.

(16) Tano Patrice Fato, Da-Wei Li, Li-Jun Zhao, Kaipei Qiu*, Yi-Tao Long. "Simultaneous Removal of Multiple Heavy Metal Ions from River Water Using Ultrafine Mesoporous Magnetite Nanoparticles." ACS Omega 2019, 4, 7543-7549.

(15) Tano Patrice Fato, Kaipei Qiu*, Li-Jun Zhao, Essy Kouadio Fodjo, Da-Wei Li, Yi-Tao Long*. "Individual Modified Carbon Nanotube Collision for Electrocatalytic Oxidation of Hydrazine in Aqueous Solution." ACS Applied Nano Materials 2018, 1, 2069-2075.

(14) Kaipei Qiu, Xue-Yuan Wu, Jie Yang, Yi-Lun Ying, Yi-Tao Long*. "Pore-Forming Confined Space for the Innovative Electrochemical Methods." Current Opinion in Electrochemistry 2018, 10, 46-53.

(13) Kaipei Qiu*, Bo Yuan, Yi-Tao Long. "Revealing the Dynamics of Single-Molecule Reactions in a Single-Molecule Nanoreactor". Biophysical Journal 2019, 116, 33a-34a.

(12) Kaipei Qiu*, Bo Yuan, Wei-Wei Zhang, Pei-Yao Wang, Yi-Tao Long. "Revealing the Dynamics of Single-Molecule Reactions in a Single-Molecule Nanoreactor". ECS Meeting Abstracts 2019, 47, 2257-2257.

(11) Hassan Alzahrani, Christophe Antoine, Koichi Aoki, … Kaipei Qiu, … Yanfang Wu, Zhugen Yang, Yi-Lun Ying. "Processes at Nanoelectrodes: General Discussion." Faraday Discussions 2018, 210, 235-265.

Before joining ECUST:

(10) Guo-Liang Chai#*, Kaipei Qiu#, Mo Qiao, Maria-Magdalena Titirici, Congxiao Shang, Zheng Xiao Guo*. "Active Sites Engineering Leads to Exceptional ORR and OER Bifunctionality in P, N Co-Doped Graphene Frameworks." Energy & Environmental Science 2017, 10, 1186-1195. (Energy & Environmental Science Readers' Choice Lectureship Paper, ESI Highly Cited Paper)

(9) Kaipei Qiu*, Guo-Liang Chai, Chaoran Jiang, Min Ling, Junwang Tang, Zheng Xiao Guo*. "Highly Efficient Oxygen Reduction Catalysts by Rational Synthesis of Nanoconfined Maghemite in a Nitrogen-Doped Graphene Framework." ACS Catalysis 2016, 6, 3558-3568.

(8) Kaipei Qiu*, Zheng Xiao Guo. "Hierarchically Porous Graphene Sheets and Graphitic Carbon Nitride Intercalated Composites for Enhanced Oxygen Reduction Reaction." J. Mater. Chem. A 2014, 2, 3209-3215.

(7) David James Martin, Kaipei Qiu, Stephen Andrew Shevlin, Albertus Denny Handoko, Xiaowei Chen, Zheng Xiao Guo, and Junwang Tang*. "Highly Efficient Photocatalytic H2 Evolution from Water using Visible Light and Structure-Controlled Graphitic Carbon Nitride." Angew. Chem. Int. Ed. 2014, 53, 9240-9245. (ESI Highly Cited Paper)

(6) David P. Trudgeon, Kaipei Qiu, Xiaohong Li,* Tapas Mallick, Oluwadamilola O. Taiwo, Barun Chakrabarti, Yufit Vladimir, Nigel P.Brandon, David Crevillen-Garcia, Akeel Shah. "Screening of Effective Electrolyte Additives for Zinc-based Redox Flow Battery Systems." Journal of Power Sources 2019, 412, 44-54.

(5) Sara-Maaria Alatalo*, Kaipei Qiu, Kathrin Preuss, Adam Marinovic, Marta Sevilla, Mika Sillanpää, Zheng Xiao Guo and Maria-Magdalena Titirici*. "Soy Protein Directed Hydrothermal Synthesis of Porous Carbon Aerogels for Electrocatalytic Oxygen Reduction." Carbon 2016, 96, 622-630.

(4) Bingjun Zhu, Kaipei Qiu, Congxiao Shang and Zheng Xiao Guo*. "Naturally Derived Porous Carbon with Selective Metal- and/or Nitrogen-Doping for Efficient CO2 Capture and Oxygen Reduction." J. Mater. Chem. A 2015, 3, 5212-5222.

(3) Xiaoxue Zhang, Kaipei Qiu, Erkki Levänen and Zheng Xiao Guo*. "Selective Morphologies of MgO via Nanoconfinement on γ-Al2O3 and Reduced Graphite Oxide (rGO): Improved CO2 Capture Capacity at Elevated Temperatures." CrystEngComm, 2014, 16, 8825-8831.

(2) Mo Qiao, Cheng Tang, Guanjian He, Kaipei Qiu, Russel Binions, Ivan Parkin, Qiang Zhang, Zheng Xiao Guo and Maria-Magdalena Titirici*. "Graphene/Nitrogen-Doped Porous Carbon Sandwiches for the Metal-Free Oxygen Reduction Reaction: Conductivity versus Active Sites." J. Mater. Chem. A 2016, 4, 12658-12666.

(1) Wenjun Luo*, Chaoran Jiang, Yaomin Li, Stephen A Shevlin, Xiaoyu Han, Kaipei Qiu, Yingchun Chen, Zheng Xiao Guo, Wei Huang* and Junwang Tang*. "Highly-Crystallized α-FeOOH for Stable and Efficient Oxygen Evolution Reaction." J. Mater. Chem. A 2017, 5, 2021-2028.