

Publication List

(Prof. Dr. Yan Lu, Helmholtz-Zentrum Berlin für Materialien und Energie)

Researcher ID: M-2034-2014 (<http://www.researcherid.com/rid/M-2034-2014>)

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Number of publications: 119

Invited review articles: 9

Book chapters: 3

Patents: 2

h-index: 42 (from Google scholar, Jan 2019)

Number of citations: 8585

(Corresponding author is marked with *)

1. H. Yu, T. Quan, S. Mei, Z. Kochovski, W. Huang, H. Meng, Y. Lu*, "Prompt Electrodeposition of Ni Nanodot Clusters on Nickel Foam to Construct a High-performance Water Splitting Electrode: Efficient, Scalable, and Recyclable", *NANO-MICRO LETT.* **2019**.
2. T. Quan, N. Goubard-Bretesché, E. Härk, Z. Kochovski, S. Mei, N. Pinna, M. Ballauff, Y. Lu*, "Highly Dispersible Hexagonal Carbon-MoS₂-Carbon Nanoplates with Hollow Sandwich Structures for Supercapacitors", *Chem. Eur. J.* **2019**, DOI: 10.1002/chem.201806060.
3. M. Rothe, Y. Zhao, G. Kewes, Z. Kochovski, W. Sigle, P. A. van Aken, C. Koch, M. Ballauff, Y. Lu, O. Benson, "Silver nanowires with optimized silica coating as versatile plasmonic resonators", *Sci. Rep.* **2019**, 9(1), 3859.
4. X. Xu, S. Angioletti-Uberti, Y. Lu, J. Dzubiella, M. Ballauff, "Interaction of Proteins with Polyelectrolytes: A Comparison between Theory and Experiment", *Langmuir* **2018**, DOI: 10.1021/acs.langmuir.8b01802.
5. S. Zhang, Z. Kochovski, H. Lee, Y. Lu, H. Zhang, J. Zhang, J. Sun, J. Yuan, "Ionic Organic Cage-encapsulating Phase-transferable Metal Clusters", *Chem. Sci.* **2019**, 10, 1450-1456.
6. N. A. Nakeeb, Z. Kochovski, T. Li, Y. Zhang, Y. Lu, B. V. K. J. Schmidt, "Poly(ethylene glycol) brush-b-poly(N-vinylpyrrolidone)-based double hydrophilic block copolymer particles crosslinked via crystalline α -cyclodextrin domains", *RSC Adv.* **2019**, 9, 4993 - 5001.

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7. J. He, H. Gao, S. Mei, J. Kneer, X. Lin, Q. Ran, F. Wang, S. Palzer, Y. Lu*, "Cu₂O@PNIPAM core-shell microgels as novel inkjet materials for the preparation of CuO hollow porous nanocubes gas sensing layers", *J. Mater. Chem. C* **2018**, **6**, 7249 - 7256.
8. F. Sun, M. Osenberg, K. Dong, D. Zhou, A. Hilger, C. J. Jafta, S. Risse, Y. Lu, H.

- Markötter, I. Manke, “Correlating Morphological Evolution of Li Electrodes With Degrading Electrochemical Performance of Li/LiCoO₂ and Li/S Battery Systems: Investigated by Synchrotron X-ray Phase Contrast Tomography”, *ACS Energy Letters* **2018**, 3, 356-365.
9. F. Sun, K. Dong, M. Osenberg, A. Hilger, S. Risse, Y. Lu, P. Kamm, M. Klaus, H. Markötter, F. García-Moreno, T. Arlt, M. Ingo, “Visualizing Morphological and Compositional Evolution of Interface of InLi-anode|thio-LISION Electrolyte in All-Solid-State Li-S Cell by in operando Synchrotron X-ray Tomography and Energy Dispersive Diffraction”, *J. Mater. Chem. A* **2018**, 6, 22489-22496.
10. R. Roaa, S. Angioletti-Uberti, Y. Lu, J. Dzubiella, F. Piazza, M. Ballauff, “Catalysis by Metallic Nanoparticles in Solution: Thermosensitive Microgels as Nanoreactors”, *Z. Phys. Chem.* **2018**, 232(5–6): 773–803.
11. Q. Ran, X. Xu, P. Dey, S. Yu, Y. Lu, J. Dzubiella, R. Haag, M. Ballauff, “Interaction of human serum albumin with dendritic polyglycerol sulfate: Rationalizing the thermodynamics of binding”, *J. Chem. Phys.* **2018**, 149, 163324.
12. W. Qi, Y. Zhang, Z. Kochovski, J. Wang, Y. Lu, G. Chen; M. Jiang, “Self-assembly of Human Galectin-1 via dual supramolecular interactions and its inhibition on T-cell agglutination”, *Nano Research* **2018**, 10, 5566-5572.
13. G. Yang, R. Hu, H. Ding, Z. Kochovski, S. Mei, Y. Lu, Y. Ma, G. Chen, M. Jiang, “CO₂-switchable response of protein microtubule: behaviour and mechanism”, *Materials Chemistry Frontiers* **2018**, 2, 1642-1646.
14. V. Živanović, Z. Kochovski, C. Arenz, Y. Lu, J. Kneipp, "SERS and Cryo-EM Directly Reveal Different Liposome Structures During Interaction with Gold Nanoparticles", *J. Phys. Chem. Lett.* **2018**, 9 (23), 6767–6772.

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15. S. Mei, C. J. Jafra, I. Lauer mann, Q. Ran, M. Kärgell, M. Ballauff, Y. Lu*, “Porous Ti₄O₇ Particles with Interconnected-Pores Structure as High-Efficiency Polysulfide Mediator for Lithium-Sulfur Batteries”, *Adv. Funct. Mater.* **2017**, 27, 1701176.
16. H. Jia, J. Cao, Y. Lu*, “Design and fabrication of functional hybrid materials for catalytic applications”, *Current Opinion in Green and Sustainable Chemistry* **2017**, 4, 16-22.
17. G. Yang, H. Ding, Z. Kochovski, R. Hu, Y. Lu, Y. Ma, G. Chen, M. Jiang, “Highly ordered self-assembly of native proteins into 1D, 2D and 3D structures modulated by a tether length of inducing ligands”, *Angew. Chem. Int. Ed.* **2017**, 56, 10691-10695.

18. J. Sun, Z. Kochovski, W. Zhang, H. Kirmse, Y. Lu, M. Antonietti, J. Yuan, “A General Synthetic Route Towards Highly Dispersed Metal Clusters Enabled by Poly(ionic liquid)s”, *J. Am. Chem. Soc.* **2017**, *139*, 8971–8976.
19. Y. Yang, S. Risse, S. Mei, C. Jafta, Y. Lu, C. Stöcklein, N. Kardjilov, I. Manke, J. Gong, Z. Kochovski, M. Ballauff, “Binder-Free Carbon Monolith Cathode Material for Operando Investigation of High Performance Lithium-Sulfur Batteries with X-Ray Radiography”, *Energy Storage Materials* **2017**, *9*, 96-104.
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21. H. Gao, H. Jia, B. Bierer, J. Wöllenstein, Y. Lu, S. Palzer, “Scalable gas sensors fabrication to integrate metal oxide nanoparticles with well-defined shape and size”, *Sensors and Actuators B: Chemical* **2017**, *249*, 639-646.

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22. Y. Lu, Matthias Ballauff, “Spherical Polyelectrolyte Brushes as Nanoreactors for the Generation of Metallic and Oxidic Nanoparticles: Synthesis and Application in Catalysis”, *Prog. Polym. Sci.* **2016**, *59*, 86-104.
23. H. Jia, R. Roa, S. Angioletti-Uberti, K. Henzler, A. Ott, X. Lin, J. Möser, Z. Kochovski, A. Schnegg, J. Dzubiella, M. Ballauff, Y. Lu*, “Thermosensitive Cu₂O-PNIPAM core-shell nanoreactors with tunable photocatalytic activity”, *J. Mater. Chem. A* **2016**, *4*, 9677-9684.
24. J. Cao, C. Jafta, J. Gong, Q. Ran, X. Lin, R. Félix, R. Wilks, M. Bär, J. Yuan, M. Ballauff, Y. Lu*, “Synthesis of Dispersible Mesoporous Nitrogen-doped Hollow Carbon Nanoplates with Uniform Hexagonal Morphologies for Supercapacitors”, *ACS Appl. Mater. Interfaces* **2016**, *8* (43), 29628–29636.
25. W. Zhang, Z. Kochovski, Y. Lu, B. V. K. J. Schmidt, M. Antonietti, J. Yuan, “Internal Morphology-Controllable Self-Assembly in Poly(Ionic Liquid) Nanoparticles”, *ACS Nano* **2016**, *10*, 7731-7737.
26. Y. Fu, Y. Lu, F. Polzer, M. Lux-Steiner, C. Fischer, “In-situ synthesis of stabilizer-free gold nanocrystals with controllable shape on substrates as highly active catalysts for multiple use”, *Adv. Synth. Catal.* **2016**, *358* (9), 1440-1448.
27. G. Yang, X. Zhang, Z. Kochovski, Y. Zhang, B. Dai, F. Sakai, L. Jiang, Y. Lu, M. Ballauff, X. Li, C. Liu, G. Chen, M. Jiang, “Precise and reversible protein microtubule-like structure with helicity driven by dual supramolecular interactions”, *J. Am. Chem. Soc.* **2016**, *138* (6), 1932–1937.

28. A. P. H. Gelissen, A. Oppermann, T. Caumanns, P. Hebbeker, S. K. Turnhoff, R. Tiwari, S. Eisold, U. Simon, Y. Lu, J. Mayer, W. Richtering, A. Walther, D. Wöll, “3D structures of responsive nano compartmentalized microgels”, *Nano Lett.* **2016**, *16*, 7295–7301.
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31. S. Mei, J. Cao, Y. Lu*, “Controllable assembly of two types of metal nanoparticles onto block copolymer nanospheres with ordered spatial distribution”, *J. Mater. Chem. A* **2015**, *3*, 3382 - 3389.
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35. S. Gu, Y. Lu, J. Kaiser, M. Albrecht, M. Ballauff, “Kinetic analysis of the reduction of 4-nitrophenol catalyzed by Au/Pd nanoalloys immobilized in spherical polyelectrolyte brushes”, *Phys. Chem. Chem. Phys.* **2015**, *17*, 28137-28143.
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