

CURRICULUM VITAE

[Quan LI]

PERSONAL DATA

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EDUCATION

1997-2001 Ph.D. in Materials Science & Engineering
Northwestern University, Evanston, IL, USA.
Thesis Supervisor: Prof. Laurence D. Marks and Scott A. Barnett
1992-1997 B.Sc. in Chemistry
Beijing University, Beijing, China

PROFESSIONAL EXPERIENCE

Apr. 2019—present Professor, Department of Physics, United College, CUHK
Aug. 2011— Mar. 2019 Professor, Department of Physics, Lee Woo Sing College, CUHK
Aug. 2007—Jul. 2011 Associate Professor, Department of Physics, Shaw College, CUHK
Jan. 2002—Jul. 2007 Assistant Professor, Department of Physics, Shaw College, CUHK

PROFESSIONAL SOCIETIES

Fellow (2021-), Royal Society of Chemistry
Member (2001-), Materials Research Society
Consulate (2011-), International Union of Crystallography

MAIN RESEARCH INTERESTS

- Fabrication and characterization of low-dimensional nanostructured materials with specific functionality and their application in energy, medicine, and quantum sensing
- Interaction of nanomaterials with biological systems and its application in medicine
- Quantum sensing for condense matter physics, bio-medicine, and energy applications

PUBLICATIONS

Total: 249; Citations: 10799

Representative publication in the past 5 years

1. Feng X, Leong WH, Xia KW, Liu CF, Liu GQ, Rendler T, Wrachtrup J, Liu RB, Li Q, "Association of Nanodiamond Rotation Dynamics with Cell Activities by Translation-Rotation Tracking" *Nano Lett*, 2021
<https://pubs.acs.org/doi/full/10.1021/acs.nanolett.0c04864>
2. Zhang YQ, Zhu YK, Lan D, Pun SH, Zhou Z, Wei Z, Wang Y, Lee HK, Lin C, Wang JP, Petrukchina M, Li Q, Miao Q, "Charging a Negatively Curved Nanographene and Its Covalent Network" *J. Am. Chem. Soc.* 143, 13, 5231-5238, 2021
<https://pubs.acs.org/doi/10.1021/jacs.1c01642>

3. Xia KW, Liu CF, Leong WH, Kowk MH, Yang ZY, Feng X, Liu RB, Li Q, “Nanometer-precision non-local deformation reconstruction using nanodiamond sensing” *Nature Communications* 10, 3259, 2019
<https://www.nature.com/articles/s41467-019-11252-3>
4. Liu GQ, Feng X, Wang N, Li Q, Liu RB, “Coherent quantum control of nitrogen-vacancy center spins near 1000K” *Nature Communications* 10, 1344, 2019
<https://www.nature.com/articles/s41467-019-09327-2>
5. Wang N, Liu GQ, Leong WH, Zeng H, Feng X, Li SH, Dolde F, Fedder H, Wrachtrup J, Cui XD, Yang S, Li Q, Liu RB, “Magnetic Criticality Enhanced Hybrid Nanodiamond Thermometer under Ambient Conditions” *Physical Review X* 8, 011042, 2018
<https://journals.aps.org/prx/abstract/10.1103/PhysRevX.8.011042>
6. Fan L, Zhang SL, Zhang CY, Yin C, Song C, Lin G, Li Q “Multidrug resistance in cancer circumvented using a cytosolic drug reservoir” *Advanced Science*, 1700289, 2018
<https://onlinelibrary.wiley.com/doi/full/10.1002/advs.201700289>
7. Zhang T, Liu GQ, Leong WH, Liu CF, Kwok MH, Ngai T, Liu RB & Li Q, “Hybrid nanodiamond quantum sensors enabled by volume phase transitions of hydrogels”, *Nature Communications*, 9, 3188, 2018
<https://www.nature.com/articles/s41467-018-05673-9>
8. Huang Y, Xu ZH, Mai JQ, Lau ZT, Lu XH, Hsu YJ, Chen YS, Lee CH, Hou YL, Meng YS, Li Q, “Revisiting the origin of cycling enhanced capacity of Fe₃O₄ based nanostructured electrode for lithium ion batteries”, *Nano Energy*, 41, 426-433, 2017
<https://www.sciencedirect.com/science/article/pii/S2211285517306067>
9. Lan D, Wang WH, Li Q “Cu₄SnP₁₀ as a promising anode material for sodium ion batteries” *Nano Energy*, 39, 506-512, 2017
<https://www.sciencedirect.com/science/article/pii/S2211285517304408>
10. Liu H, Liao LB, Lu YC, Li Q, “High Energy Density Aqueous Li-Ion Flow Capacitor”, *Advanced Energy Materials*, 7, 1, 1601248, 2017
<https://onlinelibrary.wiley.com/doi/full/10.1002/aenm.201601248>

RESEARCH GRANTS

Subproject PI of National Basic Research Program of China-973: ¥ 5M

PC of 1 CRF (Group research): \$5.9M

Co-PI of 6 RGC/CRFs (Group Research): \$28.8M

PI of 11 RGC/GRF, 1 HMRF, 1 ANR-RGC, 1 RGC-NSFC, 1 UGC One-off Special Equipment, 1 Croucher ASI, 1 NSFC/Overseas, 1 RGC-Germany: ~\$20.0M

EDITORSHIP

10/2016-present Advisory Board Member, Journal of Applied physics

02/2019-present Advisory Board Member, Nanoscale Horizon

01/2018-present Associate Editor, Nanoscale

01/2018-present Associate Editor, Nanoscale Advances