# List of full publications

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***Journal***

**2021**

1. Y. Zhao, W. Jiang, J. Zhang, E. Lovell, R. Amal, Z. Han, X. Lu, Anchoring site engineering in single-atom catalysts for highly efficient electrochemical energy conversion reactions, **Adv. Mater.**, accepted, 2021.
2. P. Guan, R. Zhu, Y. Zhu, F. Chen, T. Wan, Z. Xu, R. Joshi, Z. Han, L. Hu, T. Wu, Y. Lu, D. Chu, Performance degradation and mitigation strategies of silver nanowire networks: A review, **Crit. Rev. Solid State Mater. Sci.**, accepted, 2021.
3. M. H. A. Khan, R. Daiyan, Z. Han, M. Hablutzel, M. Haque, R. Amal, I. MacGill, Designing integrated optimal electricity supply – Electrolyzer configuration for renewable hydrogen generation in Australia, **iScience**, accepted, 2021.
4. Q. Zhang, P. Kumar, X. Zhu, R. Daiyan, N. M. Bedford, K. H. Wu, Z. Han, R. Amal, X. Lu, Electronically Modified Atomic Sites Within a Multicomponent Co/Cu Composite for Efficient Oxygen Electroreduction, **Adv. Energy Mater.**, 11, 2100303, 2021.
5. Y. Zhou, H. Qi, J. Yang, Z. Bo, F. Huang, M. S. Islam, X. Lu, L. Dai, R. Amal, C. H. Wang, Z. Han, Two-birds-one-stone: Multifunctional supercapacitors beyond traditional energy storage, **Energy Environ. Sci.**, 14, 1854 (2021).
6. J. Chen, Y. Zhou, M. S. Islam, S. A. Brown, Z. Han, C. H. Wang, Carbon fibre reinforced Zn-MnO2 structural composite batteries, **Compos. Sci. Technol.**, 209, 108787 (2021).
7. Z. Sha, F. Huang, Y. Zhou, W. Yang, Y. Yu, J. Zhang, S. Wu, S. A. Brown, S. Peng, Z. Han, C. Wang, Carbon fibre electrodes for ultra long cycle life pseudocapacitors by engineering the nano-structure of vertical graphene and manganese dioxides, **Carbon,** 117, 260 (2021).
8. T. Zurrer, K. Wong, J. Horlyck, E. Lovell, N. Bedford, Z. Han, K. Liang, J. Scott, R. Amal, Mixed-Metal MOF-74 Templated Catalysts for Efficient Carbon Dioxide Capture and Methanation, **Adv. Funct. Mater.**,31, 2007624 (2021).
9. X. Zhang, J. Fan, X. Lu, R. Amal, Z. Han, D. Chu, Bridging NiCo layered double hydroxides and Ni3S2 for bifunctional electrocatalysts: the role of vertical graphene, **Chem. Eng. J.**, 415, 129048 (2021).
10. F. Huang, G. Singer, Y. Zhou, Z. Sha, J. Chen, Z. Han, S. Brown, J. Zhang, C. H. Wang, Creating ionic channels in solid epoxy-based electrolyte by using PVA-coated carbon nanofibers, **Compos. Sci. Technol.**, 207, 108710 (2021).
11. Y. Zhao, J. Zhang, S. Wang, X. Guo, K. Yan, Z. Han, X. Lu, H. Liu, G. Wang, Constructing atomic heterometallic sites in ultrathin nickel-incorporated cobalt phosphide nanosheets via a boron-assisted strategy for highly efficient water splitting, **Nano Lett.**, 21, 823 (2021).
12. J. Chen, J. Liang, Y. Zhou, Z. Sha, S. Lim, F. Huang, Z. Han, S. A. Brown, L. Cao, D. W. Wang, C. H. Wang, A vertical graphene enhanced Zn-MnO2 flexible battery towards wearable electric devices, **J. Mater. Chem. A**, 9, 575 (2021).
13. Z. Y. Leong, Z. Han, G. Wang, S. Yang, H. Y. Yang, Electric field modulated ion-sieving effects of graphene oxide membranes, **J. Mater. Chem. A**, 9, 244 (2021).
14. M. E. Pam, D. Yan, J. Yu, D. Fang, L. Guo, X. L. Li, T. C. Li, L. K. Ang, X. Lu, R. Amal, Z. Han, H. Y. Yang, Microstructural engineering of cathode materials for advanced zinc-ion aqueous batteries, **Adv. Sci.**, 8, 2002722 (2021).
15. M. Li, B. Cai, R. Tian, X. Yu, M. B. H. Breese, X. Chu, Z. Han, S. Li, R. Joshi, A. Vinu, T. Wan, Z. Ao, J. Yi, D. Chu, Vanadium doped 1T MoS2 nanosheets for highly efficient electrocatalytic hydrogen evolution in both acidic and alkaline solutions, **Chem. Eng. J.**, 409, 128158 (2021).
16. Z. Sha, F. Huang, Y. Zhou, J. Zhang, S. Wu, J. Chen, S. A. Brown, S. Peng, Z. Han, C. H. Wang, Synergies of vertical graphene and manganese dioxide in enhancing the energy density of carbon fibre-based structural supercapacitors, **Compos. Sci. Technol.**, 201, 108568 (2021).
17. Y. Zhou, F. Huang, Z. Sha, Z. Han, J. Chen, J. Zhang, S. Peng, S. Wu, W. Yang, A. Rider, L. Dai, C. H. Wang, Hierarchically structured electrodes for moldable supercapacitors by synergistically hybridizing vertical graphene nanosheets and MnO2, **Carbon**,172, 272 (2021).
18. D. H. Seo, M. Xie, A. T. Murdock, T. van der Laan, E. Y. M. Ang, M. Lawn, M. Yao, Y. C. Woo, S. Pineda, M. Grigore, S. Yick, Z. Han, S. Gray, K. Ostrikov, G. Millar, T. Y. Ng, H. K. Shon, A. Bendavid, Rejection of harsh pH saline solutions using graphene membranes, **Carbon**, 171, 240 (2021).

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1. C. Tsounis, X. Lu, N. M. Bedford, B. Subhash, L. Thomsen, Q. Zhang, Z. Ma, K. Ostrikov, A. Bendavid, J. A. Scott, R. Amal, Z. J. Han, Valence alignment of mixed Ni-Fe hydroxide electrocatalysts through preferential templating on graphene edges for enhanced oxygen evolution, **ACS Nano**, 14, 11327 (2020).
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4. Z. Bo, J. Yang, H. Qi, J. Yan, K. Cen, Z. J. Han, Revealing ion transport in sub-2 nm two-dimensional graphene channels, **Energy Storage Mater.**, 31, 64 (2020).
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6. S. A. Moshizi, S. Azadi, A. Belford, A. Razmjou, S. Wu, Z. J. Han, M. Asadnia, Development of an ultra-sensitive and flexible piezoresistive flow sensor using vertical graphene nanosheets, **Nano-Micro Lett.**, 12, 109 (2020).
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11. H. Qi, S. Yick, O. Francis, A. Murdock, T. van der Laan, K. Ostrikov, Z. Bo, Z. J. Han, A. Bendavid, Nanohybrid TiN/vertical graphene for high-performance supercapacitor applications, **Energy Storage Mater.**, 26, 138 (2020).

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1. Z. Sha, Z. J. Han, S. Wu, F. Zhang, M. Islam, S. Brown, C. Wang, Low-temperature plasma assisted growth of vertical graphene for enhancing carbon fibre/epoxy interfacial strength, **Compos. Sci. Tech.**, 184, 107867 (2019).
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1. S. Wu, S. Peng, Z. J. Han, H. Zhu, C. H. Wang, Ultrasensitive and Stretchable Strain Sensors Based on Mazelike Vertical Graphene Network, **ACS Appl. Mater. Interfaces**, 10, 36312 (2018).
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