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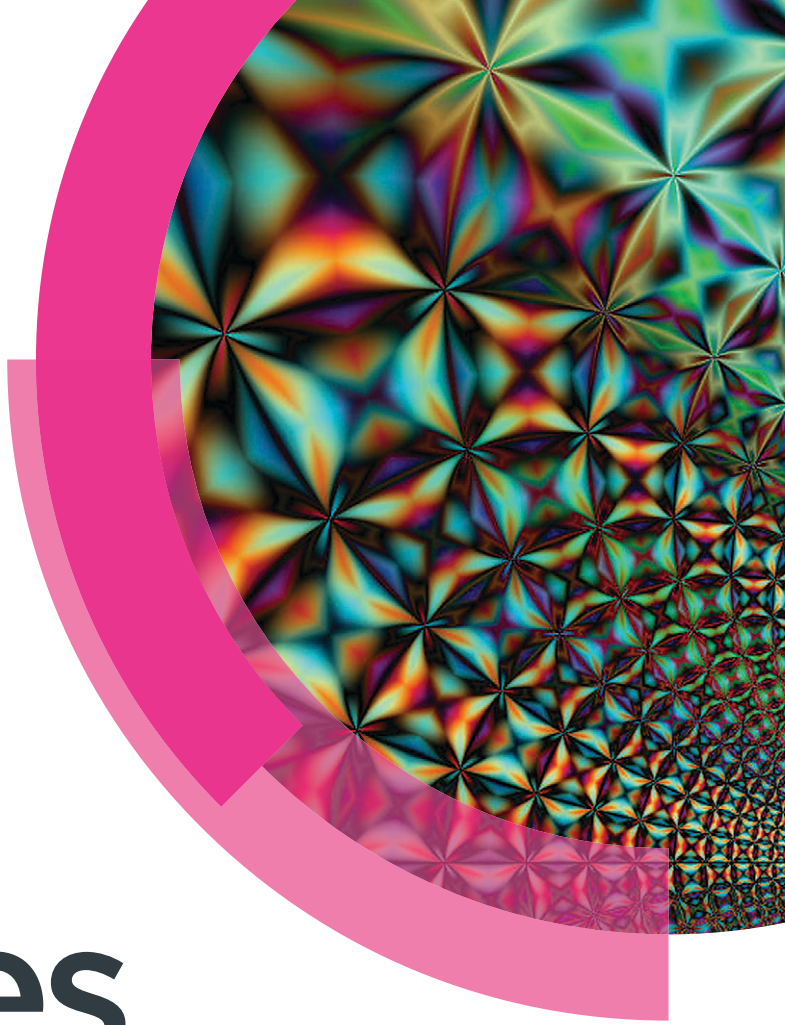

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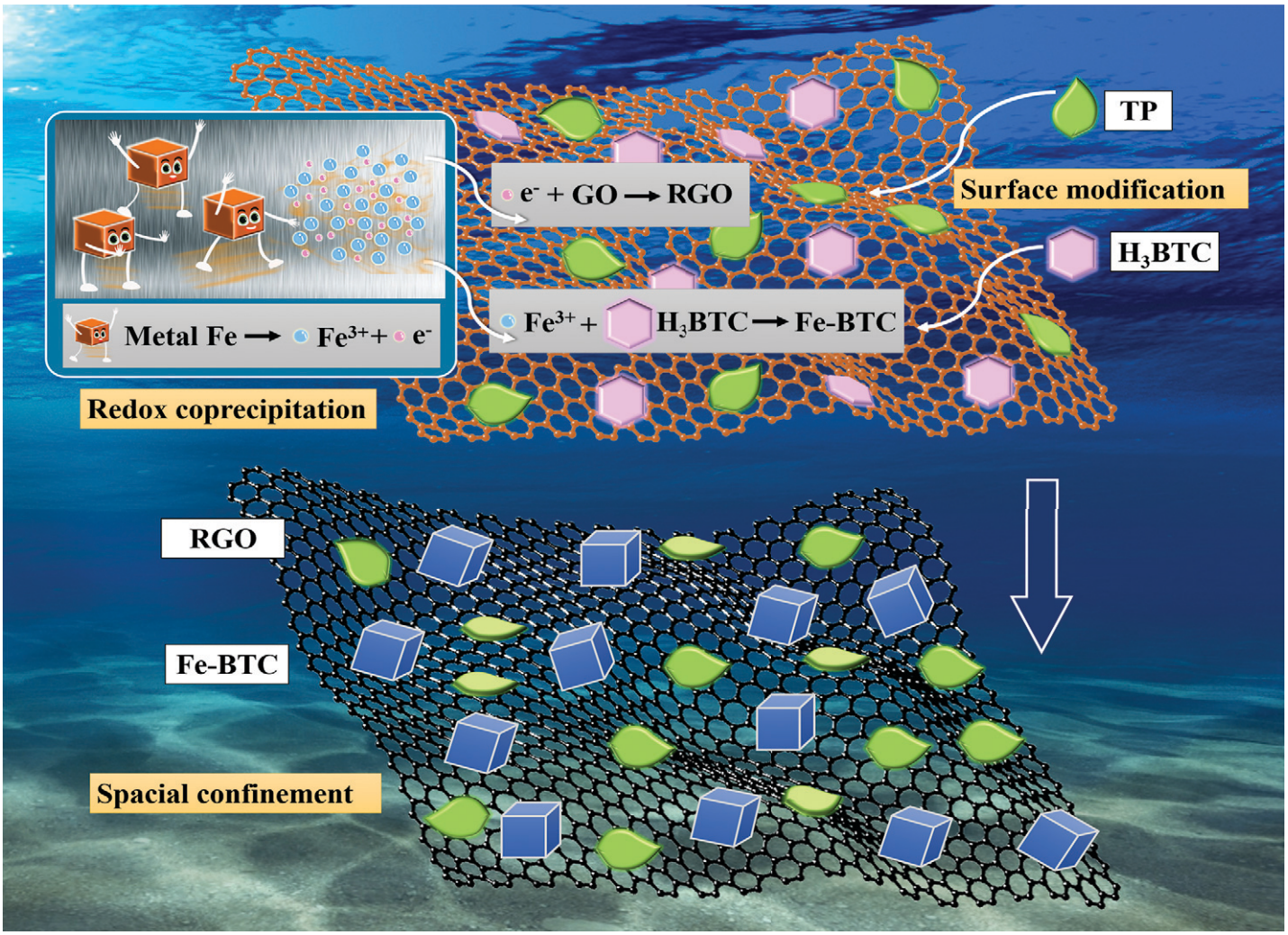

Showcasing research from Professor Binghui Xu's laboratory, Institute of Materials for Energy and Environment, College of Materials Science and Engineering, Qingdao University, Qingdao 266071, China.

Synthesis of a MOF-derived magnetite quantum dots on surface modulated reduced graphene oxide composite for high-rate lithium-ion storage

Reactions between 1,3,5-benzenetricarboxylic acid (H_3BTC), tea polyphenol (TP), graphene oxide (GO) and iron foils are triggered under mild aqueous conditions. Both H_3BTC and TP are decorated on the surface of GO sheets by π–π conjugation while the redox reaction between Fe and GO takes place. The coordination between Fe^{3+} and BTC^{3+} leads to *in situ* crystallization of Fe-BTC metal–organic framework (MOF) on the surface of the TP-decorated reduced graphene oxide (TP-RGO), both the size of Fe-BTC MOF domains and the restacking of TP-RGO sheets are significantly controlled.

As featured in:

See Binghui Xu *et al.*, *RSC Appl. Interfaces*, 2024, **1**, 233.

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