

Showcasing Zhenyu Sun's research at Department of Chemistry and Biochemistry, Ruhr University Bochum, Universitätsstraβe 150, 44801 Bochum, Germany.

Title: High-quality functionalized few-layer graphene: facile fabrication and doping with nitrogen as a metal-free catalyst for the oxygen reduction reaction

We demonstrate a facile, highly efficient and mild covalent functionalization of graphene using  $\mathsf{HNO}_3$  vapour. This results in functionalized few-layer graphene (FLG) that is high in both quantity and quality. It allows for further doping for applications, for example with nitrogen as a metal-free catalyst in the oxygen reduction reaction.



