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Abstract

Herein, iron and nitrogen co-doped carbon dots (Fe-N-CDs) were synthesized through a solvothermal method assisting with the microwave synthesis system for the first time. Multiple techniques were employed to characterize the properties of the obtained particles. The emphasis of current work was the confirmation of their intrinsic peroxidase activity due to the Fe doping, which is similar to natural ferriporphyrin. Through catalyzing the oxidization of 3,3',5,5'-Tetramethylbenzidine (TMB) in the presence of H_2O_2, the Fe-N-CDs exhibited a superior catalytic performance over horseradish peroxidase (HRP), suggesting their potential applications