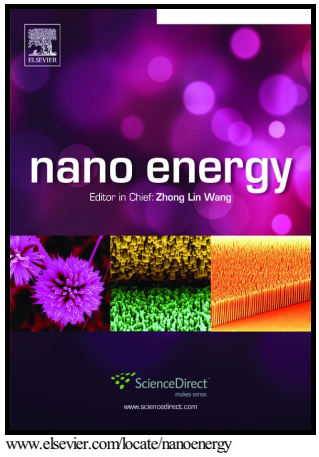

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Abstract

Here we report the synthesis of Co/Co_9S_8 core-shell structures anchored onto S, N co-doped porous graphene sheets (Co/Co_9S_8@SNGS) from thiophene-2,5-dicarboxylate (Tdc) and 4,4′ -bipyridine (Bpy) dual organic ligands assembled Co-based metal-organic frameworks (Co-MOFs) *in situ* grown on graphene oxide sheets (Co-MOFs@GO) by a room-temperature solution reaction. S-containing Tdc and N-containing Bpy not only trigger the growth of Co-MOFs nanocrystals with a fixed S/N atomic ratio of 1:2.4 on GO sheets in the presence of Co^{2+} in H_2O/NaOH

[1] These authors contributed equally to this work.