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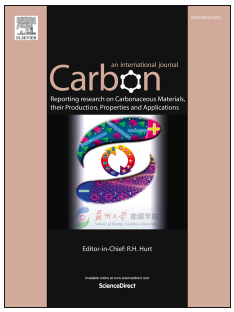

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Aqueous fluids of carbon black surface modified with ethylenediamine and polyacrylamide: applications for chemically enhanced oil recovery

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Abstract

Enhanced oil recovery (EOR) technologies mitigate the demand for new reservoirs and are pathways for more efficient uses of non-renewable hydrocarbons. Hydrolyzed polyacrylamide (HPAM) has been used as a thickening agent in aqueous media for EOR. However, HPAM shows low salt and temperature tolerances. Carbon black (CB) is a nanoparticle that exhibits chemical and thermal stability but poor dispersability in polar solvents. In this work, CB surfaces were sequentially modified with ethylenediamine (EDA) and acrylamide (AM) to fabricate CB-EDA-

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