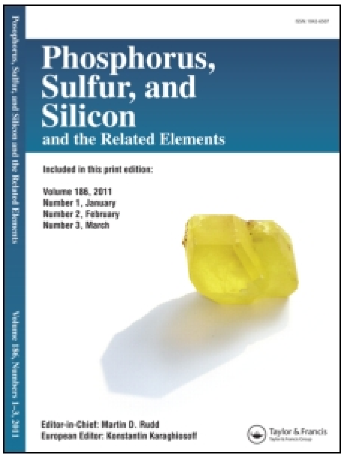

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THE MEDIUM EFFECTS IN THE SULPHONATION OF POLYCYCLIC AROMATIC HYDROCARBONS

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THE MEDIUM EFFECTS IN THE SULPHONATION OF POLYCYCLIC AROMATIC HYDROCARBONS

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Both the relative reactivities and the initial isomer distributions in the sulphonation of polycyclic hydrocarbons were found to be strongly dependent on the composition of reaction medium.

At high sulphuric acid contents in its nitrobenzene solutions the positional reactivities of biphenyl, naphthalene, phenanthrene and fluoranthene are in reasonable accordance with the theoretical predictions, whereas dilution of the systems with nitrobenzene causes more or less full failure of this regularity. The partial rate factors for some of positions (2-naphthalene, 3- and 2-phenanthrene, 1-pyrene and 8-fluoranthene) in the diluted systems seems to be anomally high. It was proved that such medium effects are not accompained by the change of kinetic law and hence, of reaction mechanism; thus they are based just on the solvation. Besides of nucleophylic and electrophylic solvation, for polycyclic hydrocarbons it may have a great importance nonspecific solvation which determines the degree of induction interactions contribution in the free energy of activation.