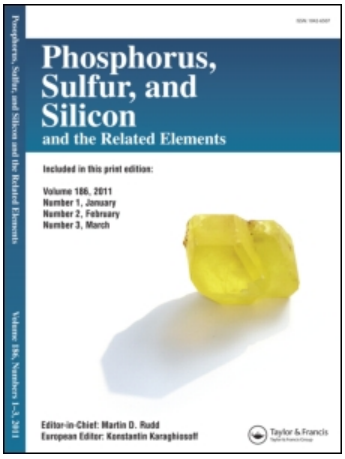

Phosphorus, Sulfur, and Silicon and the Related Elements

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Menthyl Substituted Phosphorus Compounds: Synthesis, Structures and NMR Studies

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Menthyl Substituted Phosphorus Compounds: Synthesis, Structures and NMR Studies

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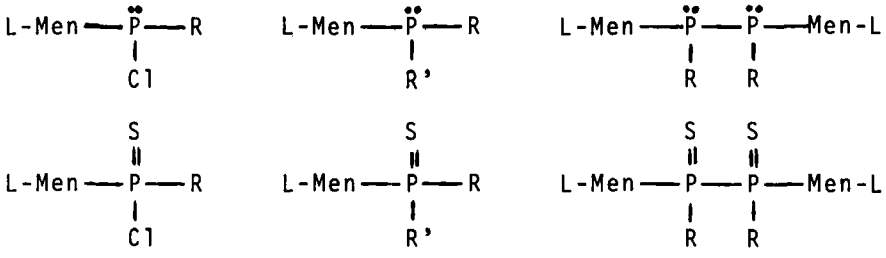
Menthyl-substituted phosphorus compounds were synthesized:



(R = CH_3, C_2H_5, i-C_3H_7, t-C_4H_9, C_6H_5, L-Men, D-Men; Men = Menthyl)

H-1- and C-13-NMR-spectra were treated by one- and two-dimensional methods to obtain stereospecific shift- and coupling-parameters. Problems of chiral, pseudo-chiral, pro-chiral and pseudo-pro-chiral compounds are discussed. Aromatic-ring-current-effects were calculated based on theories of Johnson/Bovey and Haigh/Mallion. Novel computer programs JOBO and HAMA were designed for convenient evaluation of ring-current-effects. The methods are demonstrated comparing Mosher's menthyl- und neo-menthylphosphineoxides L-Men(C_6H_5)(CH_3)PO and neo-Men(C_6H_5)(CH_3)PO $R_{(P)}$ and $S_{(P)}$ configurations. The programs may be obtained from the authors on request.