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Theoretical study of the structure of N-arylmaleimides and bis-maleimides

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Abstract

Conformational analysis of N-arylmaleimides and bis-maleimides was performed by the dipole moment method and quantum chemical calculations. The aromatic ring and heterocycle in N-arylmaleimides are turned with respect to each other through an angle of 42-44, which excludes conjugation between these fragments. No conjugation exists between the dioxopyrrole rings in bridged bis-maleimides. The structure of the examined compounds is controlled by steric factors. Pronounced inductive effect of chlorine atoms in chloro-substituted bis-maleimides is responsible for their reduced dipole moments. © 2013 Pleiades Publishing, Ltd.

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