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Principle of electronegativity. State-of-the art

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Abstract

Modern views on atomic and group electronegativity are classified. Trends in the electronegativity concept development are analysed. Special attention is paid to the latest approaches to the electronegativity determination such as concept of an «orbital» electronegativity and density functional theory A method for determination of «inductive» electronegativities is suggested. This provides tor correct theoretical calculation of a substituent electronegativities based on electronegativities of individual atoms and a substituent spatial structure. It is shown that the approach developed posses a number of important advantages, e.g. allows for the calculation of group electronegativity of isomeric substituents avoiding utilisation of an electronegativity equalisation principle. A utilisation of literature data summary and the method proposed by us allows to formulate a view on electronegativity as invariable fundamental immanent characteristic of a chemical element.