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**A New Approach to Compute Atomic Electrophilicity Index in terms of Gordy's Electronegativity**

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**Abstract**

Electrophilicity index is a well-known Conceptual Density Functional Theory-based reactivity descriptor to explain a wide range of physicochemical behaviours. In the present work, an attempt is made to evaluate a new electrophilicity index scale in terms of nucleophilicity index relying on Gordy's electronegativity scale. The computation is performed for 103 elements of the periodic table invoking regression analysis. The new set of electrophilicity index satisfies the sine qua non of a standard scale. Electrophilicity Equalization Principle is also validated by our computed data. It is put forward that the new scale will be useful in understanding various physicochemical properties and related phenomenon.

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