A QUANTITATIVE SCALE FOR THE OXIDIZING STRENGTH OF OXIDATIVE FLUORINATORS

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A quantitative scale for the oxidizing strength of oxidative fluorinators has been developed for the first time. This scale is based on F^+ detachment energies which were obtained via total energies by local density functional calculations and is anchored to its zero point by experimental values. The oxidizing strength of 27 oxidizers was determined in this manner. The results were analyzed and shown to be consistent with previous qualitative observations. The heats of formation of these oxidizers were also determined from their F^+ detachment energy values.