Stable Phenalenyl Radicals Showing Reversible Redox Chemistry Under Air

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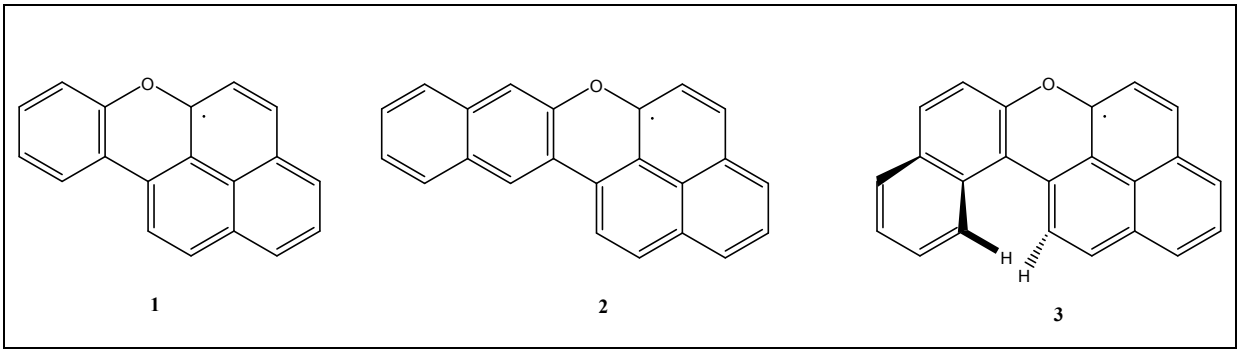
Stable free radicals based on the phenalenyl moiety for some time have been a chromophore of choice, if an organic framework capable of existing in different redox states was required, with nearly invariant bond orders.[1,2] For stability towards dimerization, however, phenalenyl radicals normally would require steric protection, hindering spin-spin communication. In this contribution, we present new data on a series of phenalenyl-based free radicals such as **1**-**3**, which are stabilized electronically via a ring oxygen atom, and do not require steric protection.[3] We will outline the synthesis, characterization, and properties of **1**-**3**, and present data that indicate that these radicals show unusual stability, both thermal, and towards oxygen.



1 **2** **3**

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