

BAY QUINONES – ELECTRONIC PROPERTIES AND STABILITY

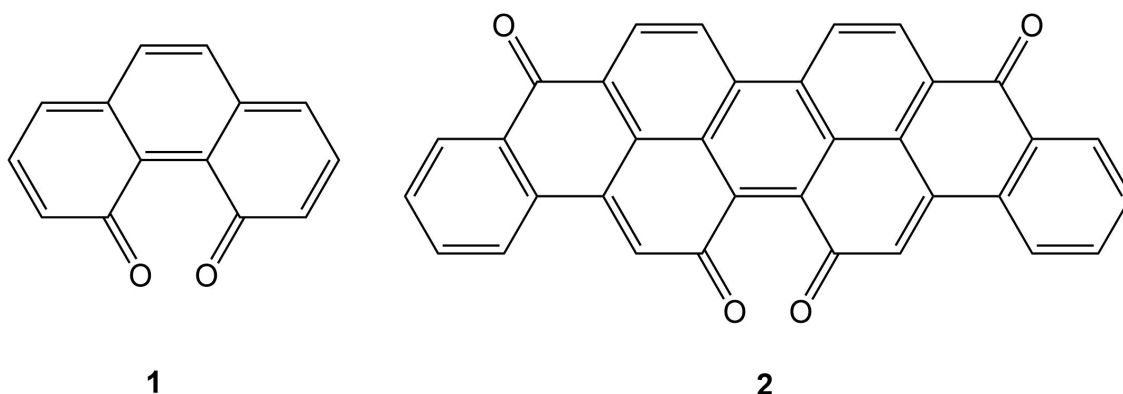
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Bay quinones have carbonyl groups pointing into the congested space of a bay region of their hydrocarbon skeleton. The parent bay quinone, phenanthrene-4,5-quinone **1**, has never been synthesized, in spite of several attempts.^[1–3] In this contribution, we report on our experiments aimed at generating **1** via low temperature electrochemical synthesis and matrix isolation spectroscopy. We will also report on the electrochemical synthesis of the larger homologue violanthrone-16,17-quinone **2**, and on the results of quantum chemical calculations revealing structure-property relationships in this little-explored class of compounds. Very low-lying, thermally populated triplet excited states were found to be a factor contributing to the very limited stability of **1** and derivatives.



REFERENCES

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