Synthesis of Soluble Perylene Compounds for Use in Photovoltaic Devices

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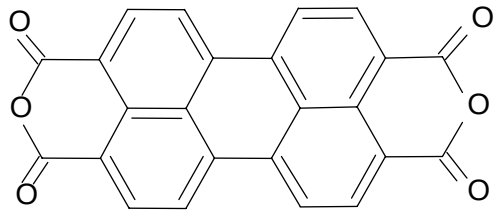
November 28, 2006



Perylene

How do we functionalize a perylene to make it soluble?

Perylene compounds have interesting optical/electrical properties but due to their insolubility are difficult to work with.

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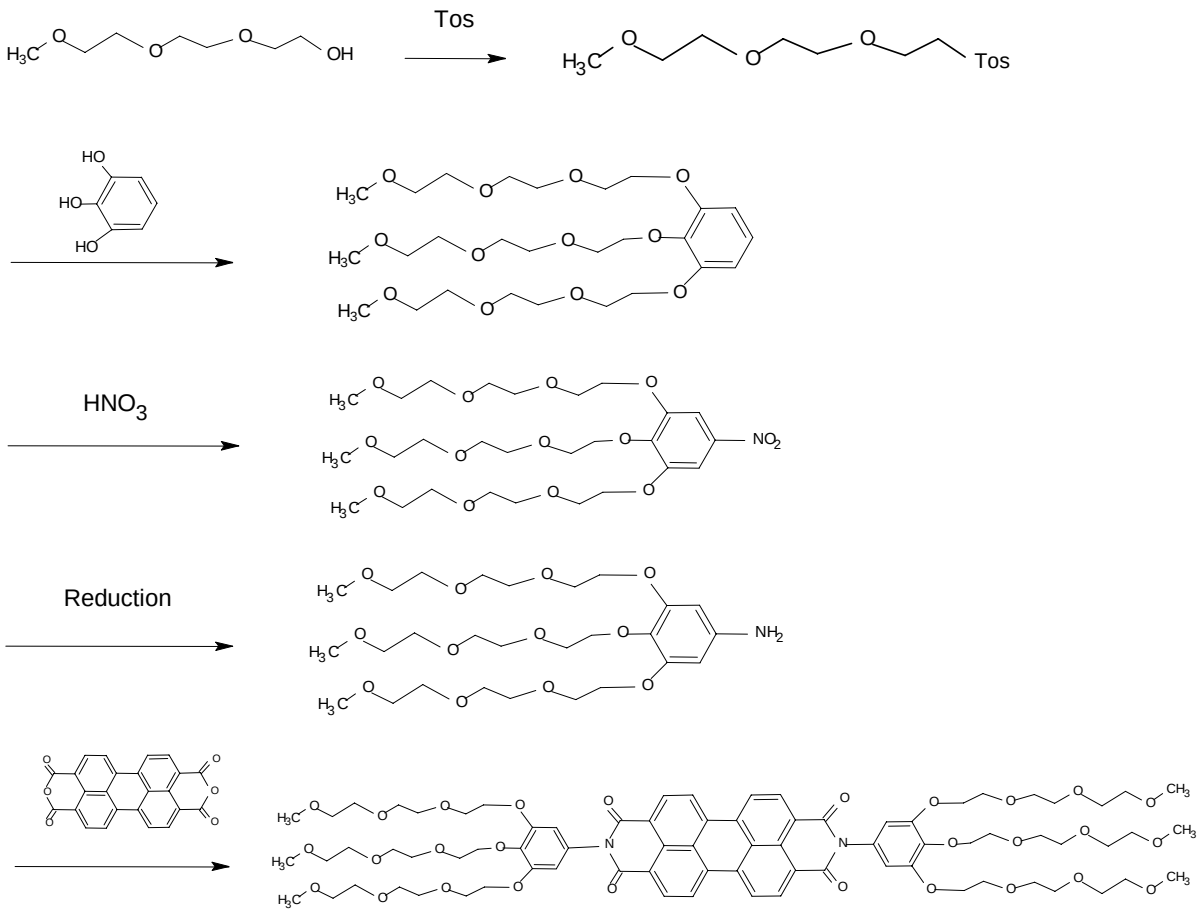
Often alkyl chains are used to increase solubility however we decided to use poly ethyl ethers.



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We are currently working on the last step of the synthesis.

It appears it may have worked, but due to the low yields and the new solubility, isolation has proven to be somewhat difficult.

The next step is to scale up all the reactions and try to optimize for better yields.

Once a sufficient quantity is synthesized and isolated. Optical and electrical characterization preformed.