



Organic Synthesis is Unequivocally Useful

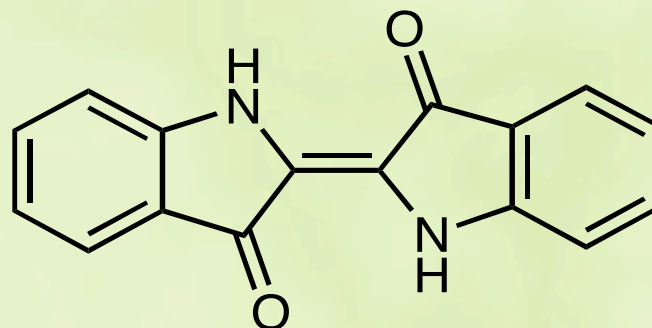
- 13th Century BC: Phoenicians manufacture "Tyrian Purple" from the secretions of mediterranean sea mollusks. For 1 g of dye, 10,000 animals and lots of labor were required, resulting in the same price as 20 g of gold. The structure of the main component was later found to be 6,6'-dibromoindigo.



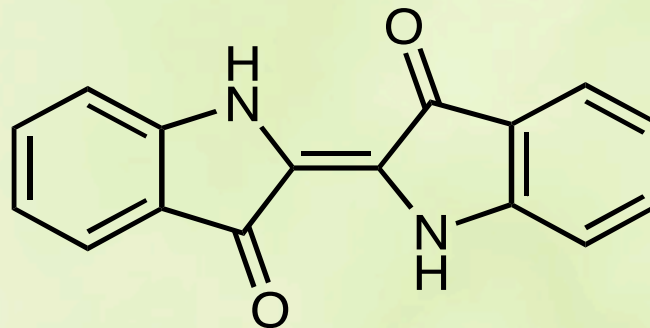
- Rome, 1st Century AD: Nero declares the right to wear "Royal Purple" garments is exclusively the emperor's. Price = \times times gold.

- 1878: A. v. Baeyer synthesizes the parent structure, and by 1897, BASF manufactures indigo on multi-ton scale:

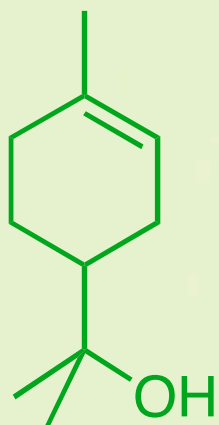
Current price: <\$500/kg



Propose A Synthesis of Indigo



Proof of Structure

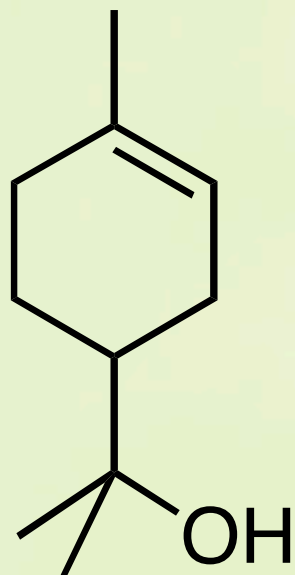


α -terpineol

"no longer be any room for doubt as to the constitution of this important substance"

- Perkin, W. H. *J. Chem. Soc.* **1904**, 654.

Propose A Synthesis of



α -terpineol