

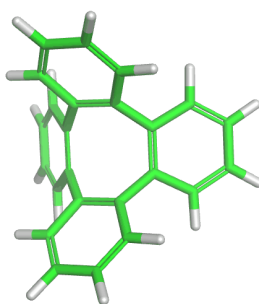
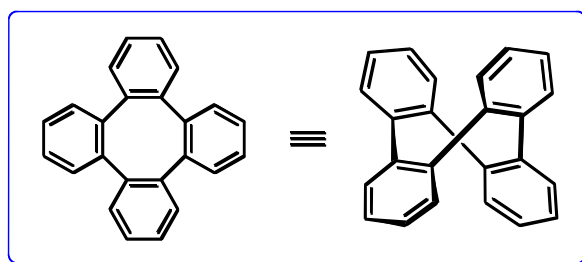
# Chemistry of Hydroxytetraphenylenes

Henry N.C. Wong (黃乃正)

School of Science and Engineering, The Chinese University of Hong Kong (Shenzhen)  
Department of Chemistry, The Chinese University of Hong Kong  
Shanghai Institute of Organic Chemistry, The Chinese Academy of Sciences  
and  
Department of Chemistry, Southern University of Science and Technology

## Abstract:

Tetraphenylene is a structurally highly interesting molecule possessing a ground state  $D_{2d}$  geometry and is achiral. When hydroxy groups are introduced to relevant positions, some hydroxy-containing tetraphenylenes, e.g., 1,16-dihydroxytetraphenylene (DHTP) and 1,8,9,16-tetrahydroxytetraphenylene (THTP) as well as their derivatives, will become chiral. In this talk, structures, and properties of some planar and helical tetraphenylene derivatives will initially be presented. We will then concentrate on the quest for enantiomerically pure hydroxytetraphenylenes, to be followed by their applications in host-guest chemistry and in asymmetric catalysis.



## Reviews:

- (1) Mak, T.C.W.; Wong, H.N.C. *Top. Curr. Chem.* **1987**, *140*, 141–164.
- (2) Mak, T.C.W.; Wong, H.N.C. in *Comprehensive Supramolecular Chemistry*; MacNicol, D.D.; Toda, F.; Bishop, P., Eds.; Pergamon Press: Oxford, 1996; Vol. 6, pp 351–369.
- (3) Hou, X.-L.; Huang, H.; Wong, H.N.C. *Synlett* **2005**, 1073-1089.
- (4) Huang, H.; Hau, C.-K.; Law, C.C.M.; Wong, H.N.C. *Org. Biomol. Chem.* **2009**, *7*, 1249-1257.
- (5) Han, J.-W.; Chen, J.-X.; Li, X.; Peng, X.-S.; Wong, H.N.C. *Synlett* **2013**, *24*, 2188-2198.
- (6) Han, J.-W.; Li, X.; Wong, H.N.C. *Chem. Rec.* **2015**, *15*, 107-131.
- (7) Han, J.-W.; Peng, X.-S.; Wong, H.N.C. *National Science Review* **2017**, *4*, 892-916.

## 黄乃正

香港中文大学荣休化学讲座教授及研究教授。一九七三年于中大取得一级荣誉理学士学位，随即获蜆壳留英奖学金赴英国伦敦大学学院进修，于七六年获颁哲学博士学位后，再赴美国哈佛大学从事博士后研究两年。一九七九至八零年，任英国 Ramsay 纪念研究员，开展独立研究工作；八零至八二年担任中国科学院上海有机化学研究所副研究员。随后，于八三年返回中大任教，曾于九五至九七年任中大化学系系主任，零二至一零年七月出任香港中文大学新亚书院院长；零九年到一三年任副校长。一二年至一八年任理学院院长，并于一四年一月起重新出任新亚书院院长至二零年十二月正式退下所有行政职务。黄教授的研究方向为天然化合物之全合成、非天然化合物之合成、以及合成方法学。现为多份国际及内地化学期刊编委、资深评委或学术谘询委员。一九九四年获英国伦敦大学颁予科学博士学位。黄教授亦积极参与内地的科研发展，现为中国科学院上海有机化学研究所沪港化学合成联合实验室管理委员会主席，并出任多所内地大学的客座及顾问教授。历年来，黄教授获颁多项奖项，包括中国国家自然科学二等奖（一九九七年）、香港裘槎基金会杰出研究奖（一九九九至二零零零年）；并分别于九九年，零四年及一五年获选为中国科学院，发展中世界科学院（前称第三世界科学院）及香港科学院院士。

