Novel Fluorophores based on Regioselective Intramolecular Friedel–Crafts Acylation of the Pyrene Ring Using Triflic Acid

Authors
Tanguy Jousselin-Oba, Kamal Sbargoud, Gianfranco Vaccaro, Francesco Meinardi, Abderrahim Yassar, Michel Frigoli

Publication date
2017/11/16

Journal
Chemistry–A European Journal

Volume
23

Issue
64

Pages
16184-16188

Description
The extension of the pyrene ring from dimethyl 2,2′-(pyrene-1,6-diyl)dibenzoate derivatives by an intramolecular Friedel–Crafts acylation can be realized in an efficient and regioselective manner using triflic acid as proton source. Naphtho-tetracenone derivatives are obtained in high yields at room temperature while Bis-tetracene-diones are prepared upon heating. Both products display interesting fluorescence properties in the visible range with quantum yields varying from 50 to 60 %.