

Sample Abstract

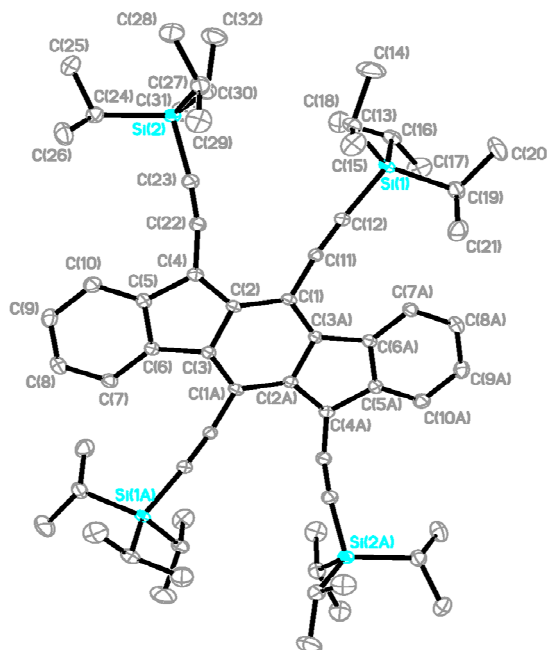
CHASE, DANIEL

Indeno[1,2-b]fluorenes: Fully Conjugated Antiaromatic Analogues of Acenes

Daniel T. Chase,^a Bradley D. Rose,^a Sean P. McClintock,^a Lev N. Zakharov,^b and Michael M. Haley^{*,a}

^aDepartment of Chemistry and Materials Science Institute, University of Oregon, Eugene, Oregon 97403-1253, USA
(dchase@uoregon.edu)

Acenes such as pentacene have been widely studied over the last decade because of their highly promising potential as organic semiconductors, and have found use in devices such as photovoltaics and field-effect transistors. Nonetheless, the locked *s-cis* diene units within acenes are an Achilles' heel, in that many acenes readily dimerize and react with oxygen. As a possible alternative, we have been examining the chemistry of indeno[1,2-b]fluorenes, a relatively unexplored class of 20 pi-electron, formally anti-aromatic compounds that contain no *s-cis* diene units. This presentation will report the synthesis, characterization and optoelectronic studies of the first stable, fully conjugated indenofluorene derivatives.[1]



[1] Chase, D. T.; Rose, B. D.; McClintock, S. P.; Zakharov, L. N.; Haley, M. M. *Angew. Chem. Int. Ed.* **2011**, *50*, 1127-1130.