Synthesis and Characterization of *cis*-Bis- and *cis,cis*-Trisfullerene[60] Adducts of Linear Acenes

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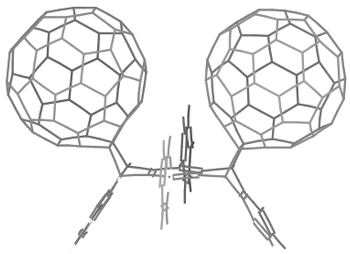
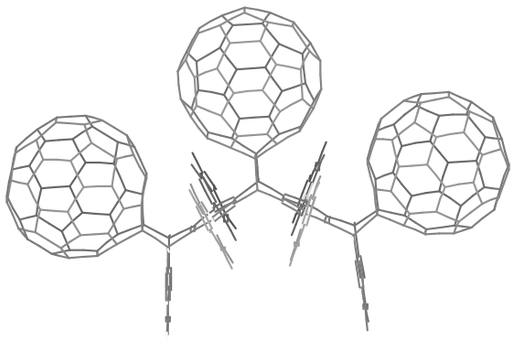
Recently, we prepared and reported [1,2,3] several *cis*-bisfullerene[60] adducts of 6,13-disubstituted pentacenes. The reactions are unusual in that they proceed in high yield and in a highly *cis*-diastereoselective fashion. Experimental and theoretical considerations indicate that favorable π-stacking interactions between fullerenes drives the diastereoselection. We have continued our investigations and now offer new evidence for π-stacking interactions between fullerenes in both *cis*-bis- and *cis,cis*-trisfullerene[60] adducts of linear acenes. Novel chemistries leading to large linear acenes will also be discussed.



cis-bisfullerene[60] adduct of 6,13-diphenylpentacene



cis,cis-trisfullerene[60] adduct of 6,8,15,17-tetraphenylheptacene

[1] G.P. Miller and J. Mack, "Completely Regioselective, Highly Stereoselective Syntheses of *cis*-Bisfullerene[60] Adducts of 6,13-Disubstituted Pentacenes," *Organic Letters* **2000**, *2*, 3979.

[2] G.P. Miller, J. Mack, and J. Briggs, "π-Stacking Interactions in *cis*-Bisfullerene[60] Adducts of 6,13-Disubstituted Pentacenes," *Organic Letters* **2000**, *2*, 3983.

[3] G.P. Miller, J. Mack, and J. Briggs, "Completely Regioselective, Highly Stereoselective Formation of Bisfullerene[60] Adducts of 6,13-Dialkynyl Substituted Pentacenes," *Fullerenes- Volume 11, Proceedings of the International Symposium on Fullerenes, Nanotubes, and Carbon Nanoclusters*, P.V Kamat, D.M. Guldi, and K.M. Kadish, Eds., The Electrochemical Soc.: Pennington, NJ, **2001**, 202.