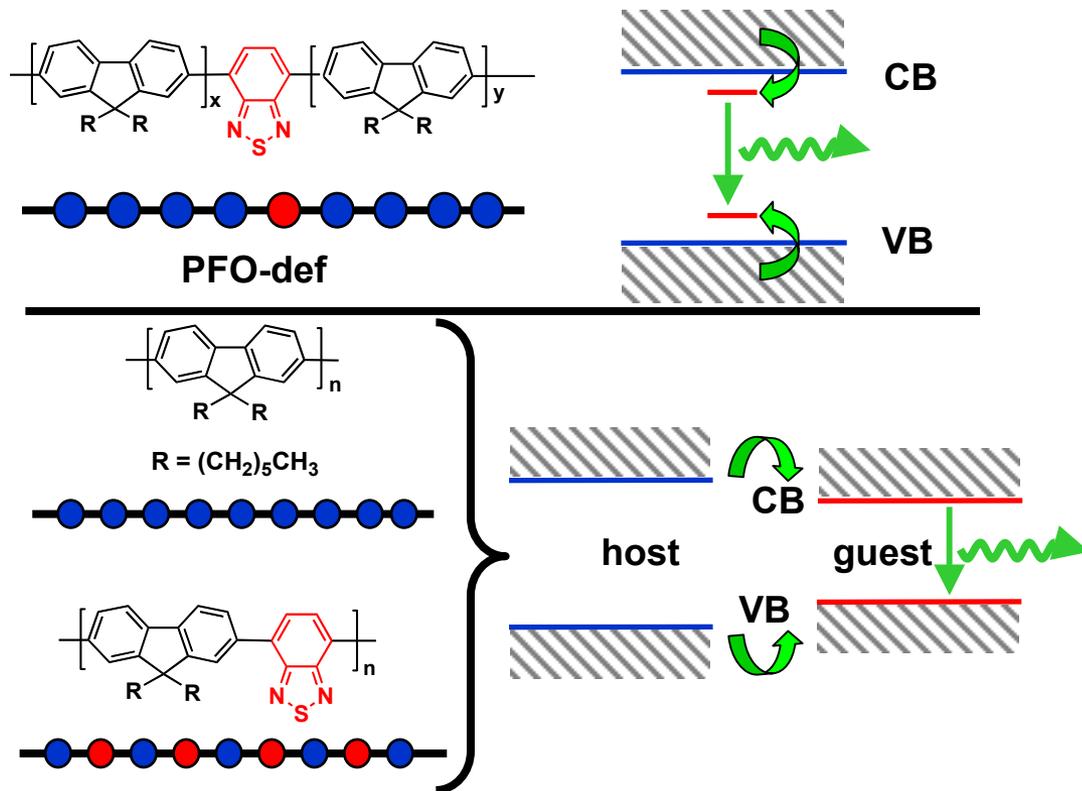


Organic Materials of Intermediate Dimensions for Optoelectronic Technologies

Guillermo C. Bazan, UCSB, DMR-0087611

A novel conjugated polymer design allows for lowering the threshold for amplified spontaneous emission—a requisite for lasing applications. The key design component involves the incorporation of a small percentage of emissive “defects” which are populated via energy transfer from the main conjugated backbone. The resulting materials display lower self-absorption. More importantly, relative to blends of polymers, there is no tendency for microphase separation and the resulting losses in energy transfer. This is a collaboration with Professor Alan Heeger (2000 Nobel Prize in Chemistry).



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Education and Outreach:

One graduate student has obtained his Ph. D. through support by this grant. The four undergraduate students on the right participated in research in the lab this summer. One of them is a minority single mother with interests in a scientific career.

