

Efforts Toward Stimuli-Responsive Naphthyridines Via Light Induced Conformational Changes

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Interest in modulating the strength (K_{assoc}) of H-bonding complexes via photo- and electrochemical means has grown with the aim of controlling self-assembly and developing stimuli-responsive materials. One potentially novel approach to such a system involves controlling the folding and unfolding of bisureido naphthyridine. Bisureido naphthyridines have been shown to adopt a folded conformation displaying a ditopic double H-bonding motif in solution. However, in the presence of various quadruple H-bonding modules, the unfolded conformation dominates, thus displaying a motif capable of forming a strong heterocomplex. Progress toward a macrocyclic, azobenzene-driven conformational switch and binding data for various analogues will be presented.

