**Storage of Solar Energy in Strained Bis-Anthracene Cycloadducts and Release as Heat by Mechanical Grinding**

An alternative to storing the energy emitted by the Sun is in covalent bonds of highly strained “chemical fuels” such as bis-anthracene (BA). When BA is exposed to light, highly energetic covalent bonds are formed. We report that simple mechanical grinding with a mortar and a pestle of that mechanophore releases stored chemical energy as heat. We also report a moderate improvement in the synthetic yield of BA. For our future studies on the molecular dynamics and kinetics of the back reaction triggered by pressure or a shear deformation, we are undertaking the synthesis of a selectively deuterated BA and other heteroatom-based analogs in the laboratory.