The Power of Light in Hexadehydro-Diels–Alder Chemistry

Selected examples:

Significance: The authors demonstrate the efficient formation of reactive benzyne intermediates through photochemically initiated hexadehydro-Diels–Alder (HDDA) cycloisomerization reaction of multi-yne precursors. The reported photochemical transformation occurs at lower temperatures than the thermal version of the HDDA.

SYNFACTS Contributors: Timothy M. Swager, Cagatay Dengiz
Synfacts 2017, 13(08), 0809 Published online: 18.07.2017

DOI: 10.1055/s-0036-1590716; **Reg-No.:** S06217SF

Comment: The authors also report that the resulting benzyne intermediates behave identically to those obtained through thermal HDDA reactions. The subsequent, highly efficient trapping reactions with π -donors and nucleophilic agents demonstrate the application of this method to access more elaborate structures.

Category

Synthesis of
Materials and
Unnatural Products

Key words

photochemistry

cycloisomerization

Diels–Alder
reaction

Synfact
of the month