Hybrid photosensitive SPAZ compounds. / J. Maisuradze, L. Devadze, Sh. Akhobadze, Ts. Zurabishvili, N. Sepashvili. / Nano Studies. – 2015. – # 12. – pp. 173-176. – eng.

Spiropyrans (SP) are one of the popular classes of photochromic bistable compounds that change their optical and structural properties in response to external inputs such as light, metal ions, heat, mechanical stress, etc. This “smart materials” are unique for photonics, optoelectronics, information record and storage, optical switches, different types of sensors, drug delivery, ecology, etc. Azobenzene (AZ) derivatives are of a particular interest due to their ability to reversibly undergo trans-cis isomerization followed by sharp changes in some of their properties. It is expected that the combination of photoactive AZ and photochromic SP could lead to an interesting light-controllable molecular device to control on-off switching of photoinduced processes. To extend their functional properties, we synthesized photobifunctional compounds SPAZ. Photoconversion of hybrid compound incorporated in polymer matrix takes place at a room temperature. Spectral data indicate intra-molecular total conjugation. Fig. 4, Ref. 10.

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