

Manipulation of Liquid Crystal Properties by Using Arylazopyrazole Photoswitches

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The development of photoresponsive functional materials remains a relevant topic in research.^[1] To achieve the best possible photoresponses, new photoswitch designs are constantly evolving to yield excellent *E*→*Z* and *Z*→*E* conversions and long thermal half-life times. Arylazopyrazoles stand out as promising candidates to address these challenges.^[2] However, only a few examples of the application of these photoswitches in thermotropic liquid crystals are known to date.^[3] Recently, we demonstrated the utilization of different photostationary states of arylazopyrazoles to induce isothermal phase transitions in liquid crystals.^[4] To gain more knowledge about the structure-property relationship of these photoswitches in materials, they were employed as dopants in supramolecular liquid crystals to create erasable photonic patterns.^[5]

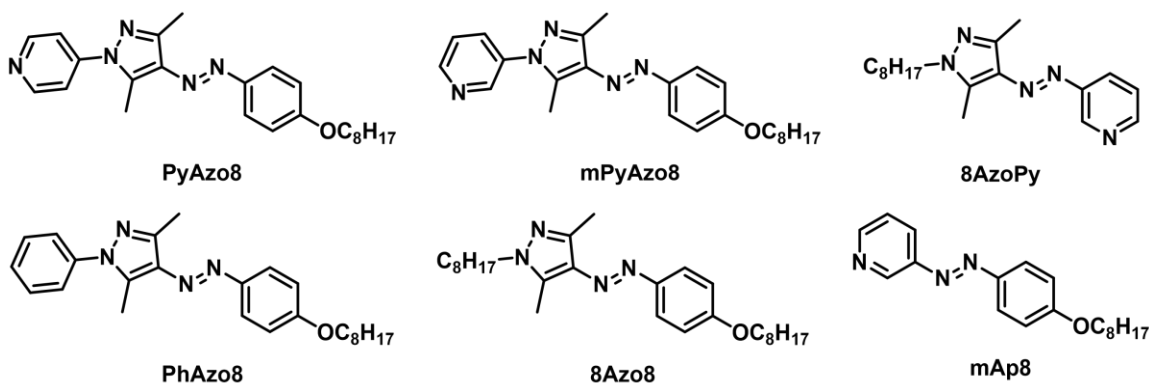


Figure 1: Library of investigated photoswitches for phase manipulation and photonic patterning of liquid crystals.

References

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