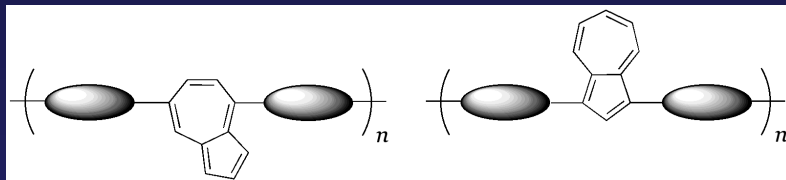


# Stimuli-Responsive Azulene-Based Conjugated Oligomers with Polyaniline-like Properties

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Novel azulene building blocks, prepared via the cycloaddition of thiophene-S,S-dioxides and fulvenes, allow for incorporation of the seven-membered ring of the azulene nucleus directly into the backbone of conjugated materials. This unique mode of incorporation gives remarkably stable, stimuli-responsive materials on exposure to acid. This simple doping/dedoping strategy provides for effective optical band gap control and on/off switching of fluorescence, reminiscent of polyaniline.

