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# Book of abstracts

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# PI-17. Newly vinyl-pyrrolo-phthalazine/pyridazine cycloadducts and their polymeric materials

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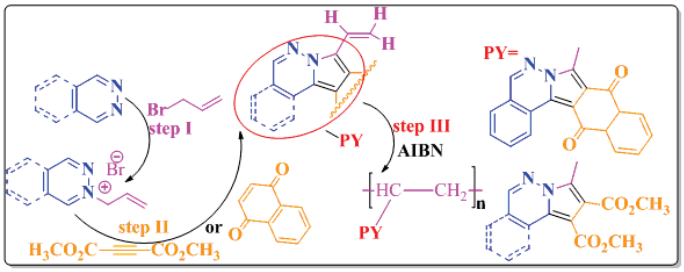
Organic light-emitting diodes (OLEDs), with azaheterocyclic skeleton, have been explored because of their applications as sensors, lasers, electroluminescent materials, and other semiconductor devices [1-2]. For designing OLEDs both small molecules and polymers can be used, as organic materials. Compared to small molecules, polymers have the advantage of high flexibility, facile processing and thermal stability [3].

Towards above mentioned, our purpose was to design, synthesize and characterize new cycloadducts with vinyl-pyrrolo-phthalazine/pyridazine framework (PPh-V/PPy-V) and also their polymeric materials (poly-PPh/poly-PPy). The synthesis strategies of novel PPh-V and PPy-V consist in two steps: I) quaternization of 1,2-diazine heterocycles with allyl bromide; II) cycloaddition reactions of salts with different dipolarophiles. The new poly-PPh/poly-PPy were produced in the step III using polymerization reactions of monomers PPh-V/PPy-V with azobisisobutyronitrile as a radical initiator. The structures of new compounds were proved using NMR experiments and UV-Vis measurements.

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