Abstract: With growing interest in using flat and curved polycyclic aromatic hydrocarbons (PAHs) in photovoltaic cells, conducting polymers, and other novel materials, new chemical methods for their synthesis need to be created. We have developed a new process to facilitate the annulation of various PAHs. Our approach uses the Buchwald-Hartwig coupling to rapidly install a cyclic ketone onto a PAH, convert it to a vinyl-triflate, and use a palladium catalyst to promote the intramolecular cyclization. Our method provides good to excellent yields of structurally diverse novel aromatics. In conjunction, we are currently investigating the mechanism of metal-mediated dehalogenation of aromatic compounds; a side reaction that can adversely affect PAH synthesis.