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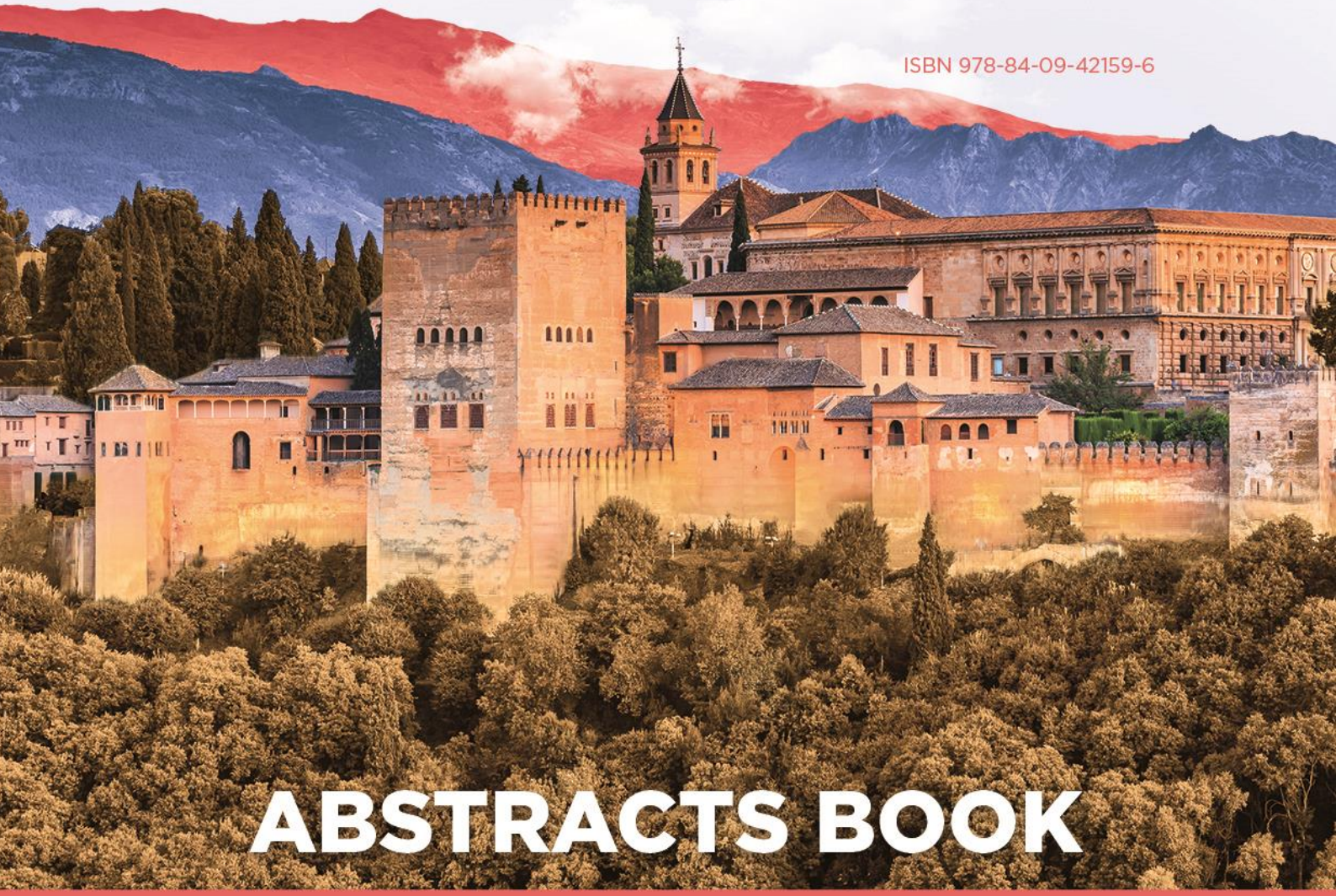

ABSTRACTS BOOK

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ULLAZINE-BASED ORGANIC PHOTOSENSITIZERS BY RH-CATALYZED DOUBLE C-H/C-H ACTIVATION

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Transition-metal catalyzed C-H bond activation has proven to be a powerful synthethic methodology to access to polycyclic aromatic hydrocarbons (PAH's) from readily available starting materials.[1] Recently, we have described the synthesis of a novel class of *N*-doped cationic PAH's bearing the benzo[*c,d*]fluoranthene scaffold by Rh(III)-catalyzed double oxidative annulation of 2-arylbenzimidazoles with alkynes.[2] Ullazines, aza-cyclopenta[*c,d*]phenalenes, possess a conjugated aromatic 16 electron π-system isoelectronic with pyrene and, therefore, become useful building blocks for organic materials with important applications in dye-sensitized solar cells (Figure 1).[3]

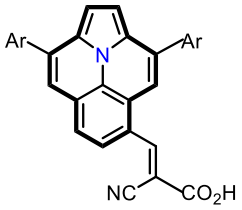
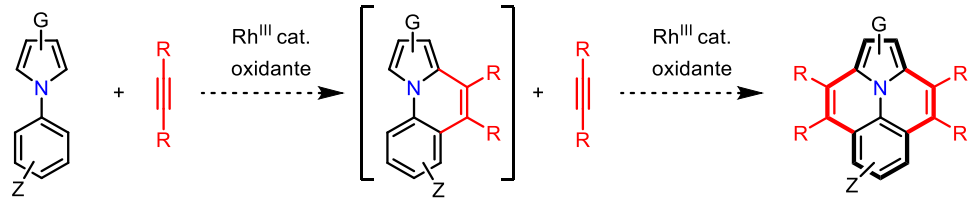


Figure 1. *Ullazine-based Organic Photosensitizers*

We herein report the exploration of a new synthetic route to Ullazines by Rh(III)-catalyzed double C-H/C-H activation (oxidative annulation) between 1-arylpyrroles and alkynes (Scheme 1).



Scheme 1*. Rh-catalyzed route to Ullazines*

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