Synthesis of 2,3,5 -trisubstituted furans through the Pd-catalyzed tandem reactions

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The furan ring is an important structural motif that is present in many naturally occuring and synthetic compounds, many of which show interesting biological activities. Compounds bearing a carboxylate group at the 3-position are particulary widespread, and a variety of natural products, pharmaceticals, and agrochemicals have structures of this type.

Over the last few decades a plethora of synthetic approaches leading to substituted furans have been developed. Strategies based on transition-metal-catalyzed cyclizations and cycloadditions have witnessed considerable attention, as they can represent straightforward approaches to the formation of acyclic precursors, usually taking place under mild conditions

During my seminar I intent to briefly discuss some methods designed for synthesis of furans, with special focus on Pd-catalyzed *5-exo-dig* tandem cyclization/coupling reactions investigated in dr Chaładaj's group. I will share newest achievements in the field of synthesis of 2,3,5-trisubstituted furans and also divagate about potential application of those reactions in obtaining rings bearing different electron withdrawing substituents at position 3.