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## **Catalysis: «Awakening Affinities» for Organic Synthesis**

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The synthesis of a complex molecule without the use of catalysis would, nowadays, be unthinkable. Catalytic reactions, from the mundane to the exotic, are ubiquitous in the field of organic synthesis. In particular, the use of transition metal catalysis has revolutionised the ways that we think about the formation of carbon-carbon bonds. We are currently employing a wide variety of metals to achieve mild and selective bond formation. This includes palladium, rhodium, osmium, iridium, platinum, silver and gold. In addition, we have developed methods using Lewis acidic main group metal catalysts. A selection of catalytic reactions and their applications will be presented

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Sinteza složenih molekula bez upotrebe katalizatora bi, u današnje vrijeme, bila nezamisliva. Katalitička reakcije, od uobičajenih do neobičnih, su sveprisutne u području organske sinteze. Konkretno, korištenje prelaznih metala kao katalizatora je napravilo pravu revoluciju u načinu na koje razmišljamo o formiranju veze ugljik-ugljik. U trenutnim istraživanjima, koristimo različite metale za selektivno stvaranjem veze pod blagim uslovima. U ovu grupu metala se ubrajaju paladij, rodij, osmij, iridij, platina, srebro i zlato. Osim toga, razvili smo metode sinteze gdje se koriste katalizatori glavne grupe metala koji se ponašaju kao Lewisove kiseline. U ovom radu će biti predstavljene izabrane katalitičke reakcije i njihovih aplikacija.