



Univerzita Karlova v Praze, Přírodovědecká fakulta

Sekce chemie PŘF UK v Praze
zve všechny zájemce na přednášku z cyklu

Quo Vadis Chemie

Reactivity of Non-Traditional Metal-Carbon Bonds: Functionalization of Carboranes



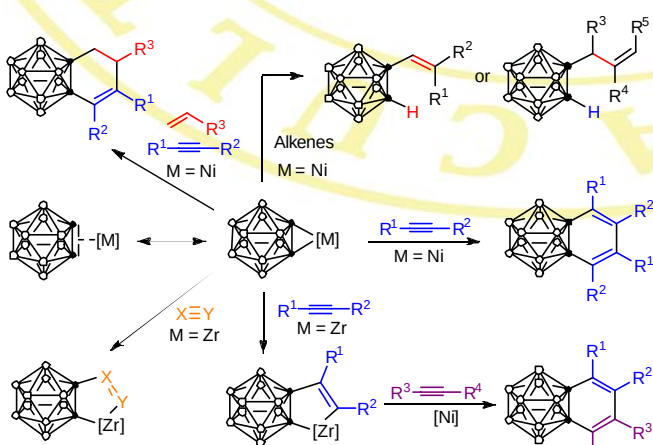
kterou přednese

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dne 15.7. v 14:00 hod.

v posluchárně CH5, v budově chemických kateder PŘF UK
Hlavova 8, Praha 2



Abstrakt: Our work shows that the $M-C_{\text{cage}}$ bonds in transition metal-carboranyl complexes are generally inert toward electrophiles, which is significantly different from that of traditional $M-C$ bonds. The reasons can be ascribed to steric effects imposed by carboranyl moiety. To overcome this steric problem and to activate the non-traditional $M-C_{\text{cage}}$ bonds, we prepared a series of transition metal-carboryne (carboryne = 1,2-dehydro-o-carborane) complexes as the formation of metallacyclopropane can

increase the open coordination sphere and create the ring strains, facilitating the reactions of $M-C_{\text{cage}}$ bonds with electrophiles.

[1] Z. Qiu, S. Ren, Z. Xie, *Acc. Chem. Res.* **2011**, 44, 299. [2] Z. Qiu, S.R. Wang, Z. Xie, *Angew. Chem. Int. Ed.* **2010**, 49, 4649. [3] Z. Qiu, Z. Xie, *J. Am. Chem. Soc.* **2010**, 132, 16085. [4] S. Ren, Z. Qiu, Z. Xie, *J. Am. Chem. Soc.* **2012**, 134, 3242. [5] S. Ren, Z. Qiu, Z. Xie, *Angew. Chem. Int. Ed.* **2012**, 51, 1010. .