Synthesis and applications of metallaboroxine polymers as hydrophobic thin films

R. Jambor[1], M. Srb[1], M. Novák[2], Š. Podzimek[2]

[1] *Department of General and Inorganic Chemistry, Faculty of Chemical Technology, University of Pardubice, Czech Republic, Studentská 573, 532 10 Pardubice 2, Czechia*
[2] *Institute of Chemistry and Technology of Macromolecular Materials, , Faculty of Chemical Technology, University of Pardubice, Czech Republic, Studentská 573, 532 10 Pardubice 2, Czechia*

In the current context of green chemistry, there is a growing pressure to find new non-fluorinated alternatives of hydrophobic polymers and thus seeking of new hydrophobic polymers is thus hot topic.[1] Here we present synthesis and applications of new polymers based on metallaboroxines. These materials were found as good film forming materials and thus these polymers were used for the preparation of thin layer by spin coating at Si, SiO_2 and polyethylene surfaces. The layers were characterized by the help of SEM, VASE, XRF, UV-VIS spectroscopy and finally their WCA were determined.

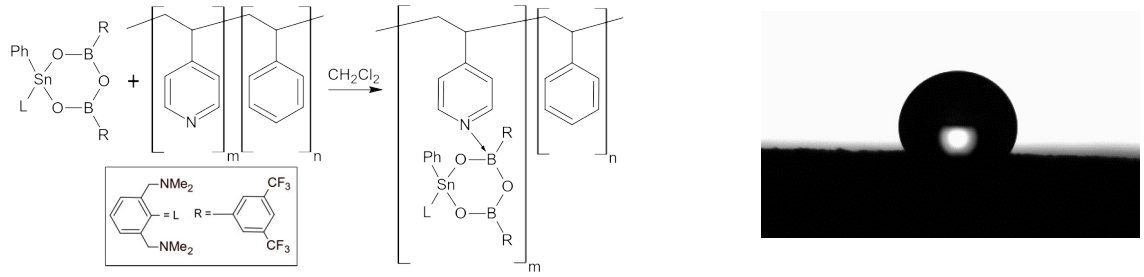

Figure 1 Example of new metallaboroxine based hydrophobic polymer with WCA 125°

Keywords: heteroboroxines, thin layers, hydrophobicity

Acknowledgments
We are grateful for the support of this research by the Czech Science Foundation (GA23-06548S).

References
[1] Li X., Li B., Li Y., Sun J., Chem. Engineering J. 404: 126504-126512, 2021