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Synthesis of lanthanoid pyrazolates by redox transmetallation utilising trispentafluorophenylbismuth

Syntheses of high reactivity lanthanoid organometallics (Ln-C), organoamides (Ln-NR₂), and aryloxides (Ln-OAr) by redox transmetallation (RT) and redox transmetallation protolysis (RTP) reactions have been widely and successfully studied by using mercury compounds. [1] This report describes a new method to synthesize metal-organic lanthanoid derivatives by using trispentafluorophenylbismuth replacing more toxic mercury reagents. This approach is more environmentally friendly. Lanthanoid pyrazolates were successfully synthesized from lanthanoid metal, pyrazoles and trispentafluorophenylbismuth.

References

[1] (a) M. L. Cole, G. B. Deacon, C. M. Forsyth, P. C. Junk, K. Konstas, J. Wang. Chem. Eur. J., 2007, 13, 8092-8110; (b) M. L. Cole, G. B. Deacon, C. M. Forsyth, P. C. Junk, K. Konstas, J. Wang, H. Bittig, D. Werner. Chem. Eur. J., 2013, 19, 1410-1420; (c) G.B. Deacon, A.J. Koplick, W.D. Raverty, D.G. Vince. J. Organomet. Chem., 1979, 182, 121-141; (d) C.M. Forsyth, G.B. Deacon. Organometallics., 2000, 19, 1205-1207; (e) G. B. Deacon, C. M. Forsyth, S. Nickel. J. Organomet. Chem., 2002, 647, 50-60; (f) M. L. Cole, G. B. Deacon, C. M. Forsyth, K. Konstas, P. C. Junk. Dalton Trans., 2006, 3360-3367.

Are you a student?

Yes

Do you wish to take part in the Student Poster Slam?

No

Are you an ECR? (<5 yrs since PhD/Masters)

No

What is your gender?

Female

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Track Classification: Advanced Materials