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POLYNUCLEAR METALLIC ARCHITECTURES BASED ON FLUORINATED FUNCTIONALIZED DIKETONATES

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Abstract. β -Diketones are among the most used tools in the coordination chemistry providing the wide diversity of metal-organic architectures such as homo- and heterometallic complexes, clusters of various nuclearities, MOFs, nanoparticles, thin metal films. We have elaborated the preparation of a novel lithium fluorinated β -diketonates bearing acetal fragment [1]. In this work, using trifluoromethyl-containing lithium diketonate we have obtained a number of 3d and 4f metal complexes. In addition, synthetic routes to fluorinated β -diketonates with variable substituents or alkali metals and their use in the preparation of lanthanide complexes will be discussed (Fig.).

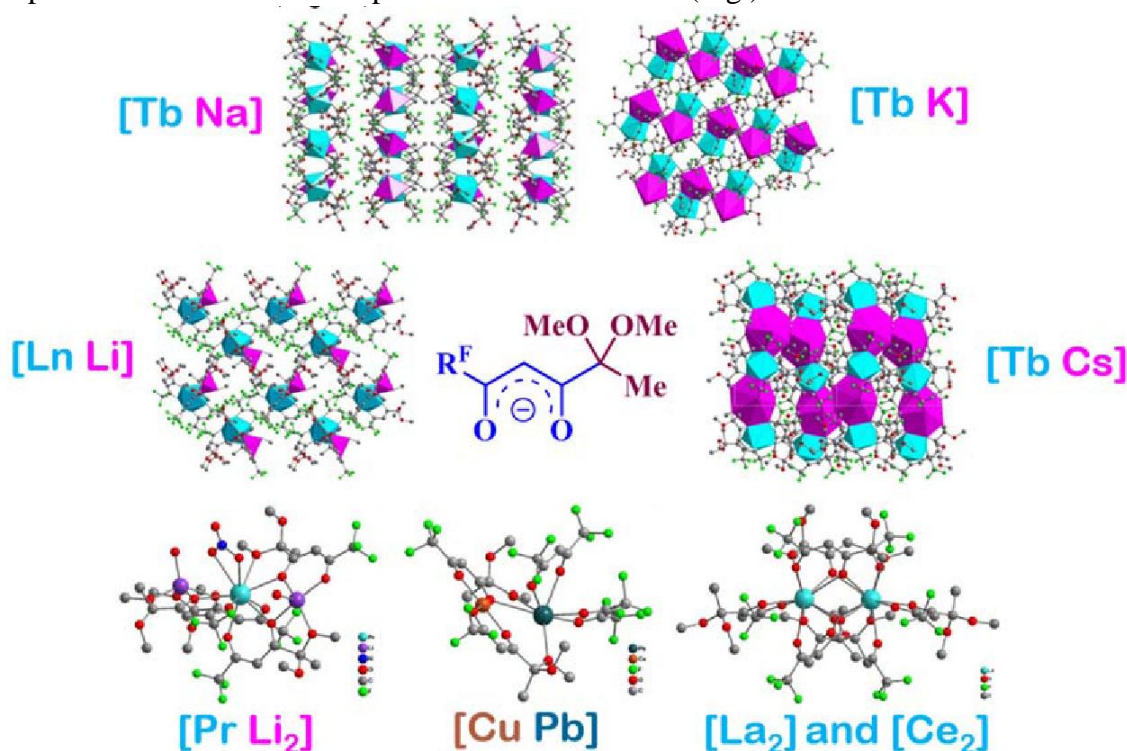


Figure. The variety of polynuclear complexes based on fluorinated functional diketonates.

References

1. Bazhin, D. N., Chizhov, D. L., Rösenthaller, G.-V., Kudyakova, Yu. S., Burgart, Y. V., Slepukhin, P. A., Saloutin, V. I., and Charushin, V. N. (2014). A concise approach to CF₃-containing furan-3-ones, (bis)pyrazoles from novel fluorinated building blocks based on 2,3-butanedione. *Tetrahedron Lett.* Vol. 55, Iss. 42, pp. 5714–5717.

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