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European Journal of Inorganic Chemistry

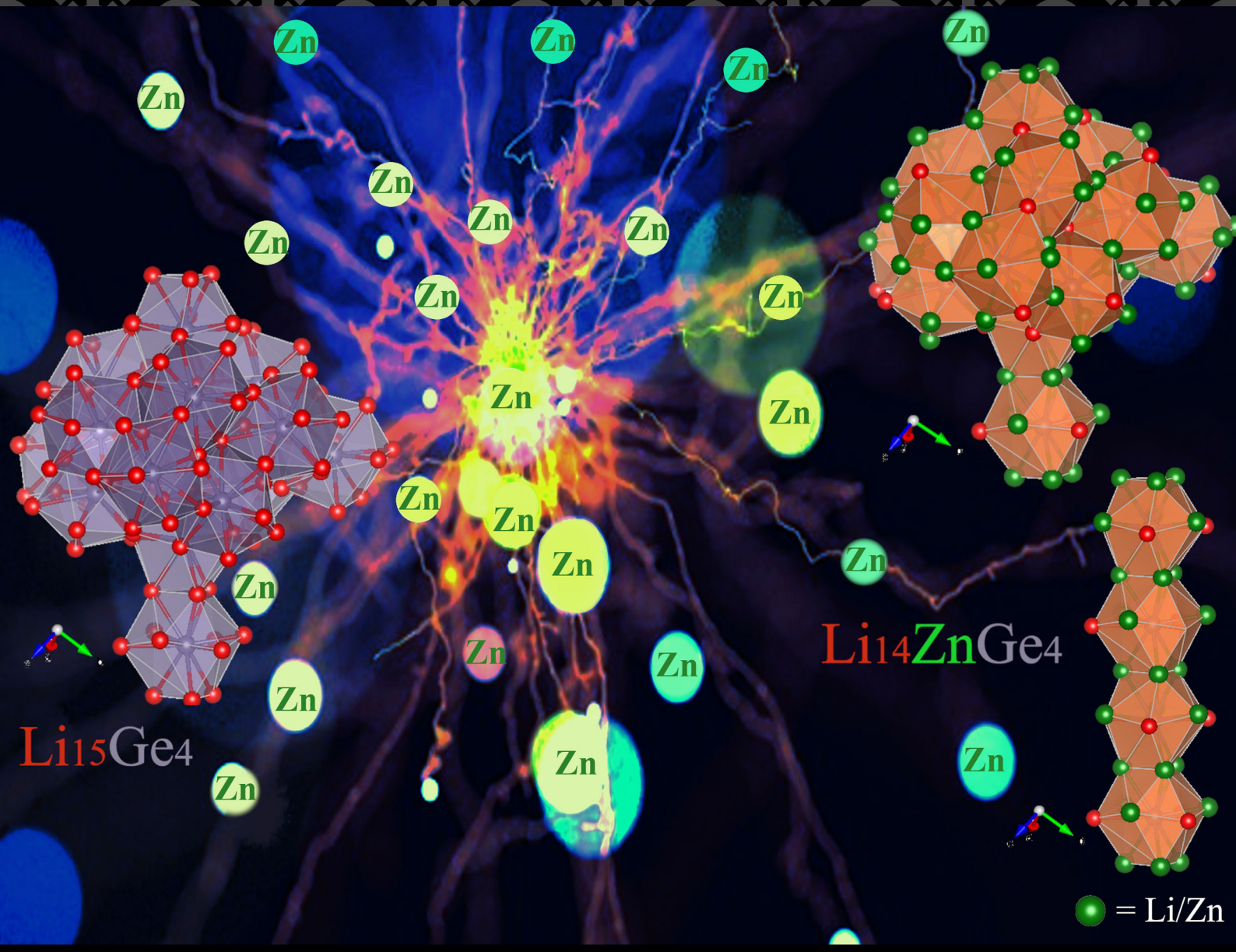
Chemistry Europe

European Chemical Societies Publishing

Cover Feature:

H. H. Osman and S. Bobev

Experimental and Theoretical Study on the Substitution Patterns in Lithium Germanides: The Case of $Li_{15}Ge_4$ vs $Li_{14}ZnGe_4$



4/2022

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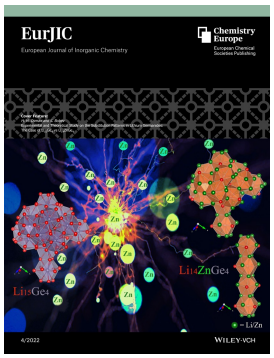
The Cover Feature shows the synthesis of $Li_{14}ZnGe_4$ by substitution of Li by Zn within the parent $Li_{15}Ge_4$ binary phase. The new compound crystallizes in a body-centered cubic unit cell with a cell parameter of 10.695(1) Å. The substitution is controlled by the distance between Li1/Li2 and their neighbors. Zn atoms prefer to occupy the Li1 (48*e*) site. $Li_{14}ZnGe_4$ has a more stable electronic structure than $Li_{15}Ge_4$ with the Fermi level located at a deep minimum of the electronic density of states. The new compound is possibly an intermediate in the lithiation pathways for several potential anode materials in Li-ion batteries. More information can be found in the Research Article by H. H. Osman and S. Bobev.



*Dr. H. H. Osman, Prof. S. Bobev**