



## Invited speaker's information form of IUMRS-ICA 2017

**Presentation on Symposium F2:  
Materials Design, Discovery, and Optimization Based on Computation**



**The New Lead-free Solders Database**  
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**Dr. Gierlotka got his PhD at AGH University and Technology in Krakow, Poland. From the beginning of his scientific work he focuses on thermodynamic modeling of condensed phases. He is author or co-author of more than 50 SCI papers about thermodynamic modeling. Currently, dr. Gierlotka holds associate professor position at National Dong Hwa University in Hualien, Taiwan.**



**Abstract:**

**The lead-free soldering materials play important role in electronic industry, hence knowledge about their phase equilibria and phase transformations is crucial. On other hand, thermodynamic modeling allows for fast and cheap prediction of materials behavior, what nowadays is essential for R&D offices associated with corporations. The New Lead-free solders database contains Gibbs energies of lead-free binary, ternary and quaternary systems obtained from own experimental data as well as from literature information. On other words, the database is not a compilation of already existing thermodynamic descriptions but a new set of functions developed from newest experimental data.**

Please fill the above form and send it to Prof. Shih-kang Lin ( [linsk@mail.ncku.edu.tw](mailto:linsk@mail.ncku.edu.tw) ), Prof. Nien-Ti Tsou ( [tsounienti@gmail.com](mailto:tsounienti@gmail.com) ), and Prof. Chih Chen ( [chih@mail.nctu.edu.tw](mailto:chih@mail.nctu.edu.tw) ).