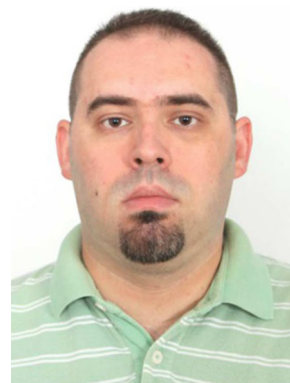


## Thermal analysis and calorimetry in Central and Eastern Europe as a tool for solving diverse issues in different fields of science and applications

### *Guest Editors*



**Prof. Romana Cerc Korošec**  
Faculty of Chemistry and Chemical Technology,  
University of Ljubljana,  
Ljubljana, Slovenia  
romana.cerc-korosec@fkkt.uni-lj.si



**Prof. Andrei Rotaru**  
INFLPR—National Institute for Laser,  
Plasma and Radiation Physics,  
Măgurele (Ilfov),  
Bucharest, Romania  
andrei.rotaru@inflpr.ro

This compilation is based on the peer-reviewed and selected papers presented at CEEC-TAC3.

## Preface

Romana Cerc Korošec<sup>1</sup> · Andrei Rotaru<sup>2</sup>

Received: 7 September 2016 / Accepted: 2 October 2016 / Published online: 25 October 2016  
© Akadémiai Kiadó, Budapest, Hungary 2016

The 3rd Central and East European Conference on Thermal Analysis and Calorimetry (CEEC-TAC3) was organized in the capital of Slovenia, Ljubljana, from 25 to 28 of August 2015. The third in the series of CEEC-TAC conferences, dedicated to *Thermal analysis and calorimetry as a tool for solving diverse issues in different fields of science and applications*, was a continuation of the former two. The first conference took place in Craiova, Romania, in September 2011, and the second one was held in Vilnius, Lithuania, in August 2013. Even though the original idea of the Central and East European Conference on Thermal Analysis and Calorimetry was to interconnect researchers working in that broad field from the Central and Eastern European countries, from the very beginning the scientists all over the world contributed to this event. We are happy to say that the numbers of participating countries during CEEC-TAC conferences are constantly increasing: researchers from 32 different countries attended the CEEC-TAC1 conference, 35 countries participated in the CEEC-TAC2 conference, while the number increased to 41 countries (from 5 continents) in the CEEC-TAC3 conference.

Ljubljana is the capital of Slovenia, a small country in the heart of Europe, where the Alps meet the Mediterranean and the Pannonian Plain meets the Karst. It is a lively industrial, commercial, administrative and cultural centre with a population of 300,000 people, of which 54,000 are students. Ljubljana has preserved evidence of all five millennia of its

history, including the remains of the Roman city of Emona and the old city centre with its medieval castle and beautiful buildings with Baroque façades and decorative features. In the first half of the twentieth century, it was the world famous architect Jože Plečnik that put a personal stamp on his native city, and the so-called Plečnik's Ljubljana ranks among the twentieth century's most prominent total works of art. Ljubljana's appearance was further shaped by Plečnik's pupils and a whole new wave of renowned young Slovenian architects. Ljubljana has been named the 2016 European Green Capital.

During the CEEC-TAC3 conference in Ljubljana, researchers from all over the world brought attractive and detailed insights into various specific aspects in the field of thermal analysis and calorimetry and gave us a glimpse into the progress of the field itself, technical and measurement development, as well as new trans-disciplinary ideas. A wide range of topics was covered by 4 Plenary lectures, 2 Award Plenary lectures and 18 Invited Lectures; there were 4 parallel sessions of 21 oral presentations each and 3 poster sessions with 85 posters each. Beside the fundamental studies concerning kinetic analysis and mechanisms of chemical reactions, which can be studied with different thermal techniques, thermal analysis is also an indispensable tool in the field of material and life sciences. With the aid of other measuring techniques, it enables researchers to compose a complex picture from separate puzzles, each representing one of these techniques. We hope that novel ideas, scientific and practical knowledge were acquired during the lectures and informal discussions.

We would like to once again congratulate the researchers for their valuable contribution in the field of thermal analysis and calorimetry: the award for the “Distinguished TA&C Researcher in Central and Eastern Europe” was bestowed upon Professor Henryk Piekarski (Poland) on behalf of the CEEC-TAC Association and the Diamond Sponsor TA Instruments. The award for the “Outstanding Young TA&C

---

✉ Romana Cerc Korošec  
romana.cerc-korosec@fkkk.uni-lj.si

Andrei Rotaru  
andrei.rotaru@inflpr.ro

<sup>1</sup> Faculty of Chemistry and Chemical Technology, University of Ljubljana, Ljubljana, Slovenia

<sup>2</sup> INFLPR—National Institute for Laser, Plasma and Radiation Physics, Măgurele (Ilfov), Bucharest, Romania

Researcher in Central and Eastern Europe”, sponsored by Platinum Sponsor Mettler Toledo, was given to Dr Jiri Kucerik (Germany). Three Grants for Young Researchers, sponsored by Platinum Sponsor Netzsch, were bestowed to Dr Roman Svoboda (Czech Republic), Dr Claudiu Nicolicescu (Romania) and Dr Ida Chojnacka (Poland). Three travel grants were offered to Agnieszka Chojnacka (Poland), Maria Fernandez Lopez (Spain) and Oleg Petuhov (Moldova). Professor Jaroslav Šestak and Dr Pavel Holba (both from Czech Republic) became new honorary members of the CEEC-TAC Committee.

We are grateful to the people who contributed and supported the organization of this event, especially to the members of the Honorary Committee, Scientific Committee, International Organizing Committee, National Associations for Thermal Analysis and Calorimetry from the Central and Eastern European Countries, Executive Organizing Committee, University of Ljubljana, the Municipality of Ljubljana, University of Craiova and INFLPR, Bucharest. We are very grateful to the Faculty of Chemistry and Chemical Technology of the University of Ljubljana for providing an inspiring venue for the

conference! We acknowledge the great support of our sponsors: TA INSTRUMENTS (Diamond Sponsor); METTLER TOLEDO and NETZSCH (Platinum Sponsors); SETARAM, DSC CONSUMABLES, and LINSEIS (Gold Sponsors). A special acknowledgement has to be addressed to the *Journal of Thermal Analysis and Calorimetry* for publishing one more volume dedicated to this subject and to the reviewers that put all effort in enhancing the scientific quality of the volume. Finally, we would like to thank all the people that helped, assisted and supported us during the preparation of the CEEC-TAC3 conference.

We hope that the CEEC-TAC3 conference was fruitful and that you enjoyed your stay in Ljubljana. We would like to cordially invite you to participate in our forthcoming CEEC-TAC4 conference in Moldova in 2017.

As the title of the Special Issue states, we are pleased to introduce *Thermal analysis and calorimetry in Central and Eastern Europe as a tool for solving diverse issues in different fields of science and applications* to the readers of the *Journal of Thermal Analysis and Calorimetry*.

## Acknowledgements

*The Guest Editors are very grateful to the following scientists for their critical and valuable reviews which have significantly contributed to the quality of the papers in this Special Issue.*

Aksu Canbay, C., Turkey  
 An, W., China  
 Anand, S., India  
 Andreola, F., Italy  
 Anthonysamy, S., India  
 Aragao, C. F. S., Brazil  
 Arsenovic, M., Serbia  
 Avar, B., Turkey  
 Bellich, B., Italy  
 Bouabdallah, M., Algeria  
 Carp, O., Romania  
 Chambre, D. R., Romania  
 Cheng, J., China  
 Chmielarz, L., Poland  
 Chrissafis, K., Greece  
 Dadarlat, D., Romania  
 Dağdelen, F., Turkey  
 Dalmazzone, D., France  
 Demir, H., Turkey  
 Dima, S.-O., Romania  
 Dohnalová, Ž., Czech Republic  
 Dóka, O., Hungary  
 Dou, Q., China  
 Drabik, M., Slovakia  
 Drozd, E., Poland  
 Dumitru, F., Romania  
 El-Sayed Amin, M., Egypt  
 Eslami, A., Iran  
 Ferenc, W., Poland  
 Fernandes Silva, M., Brazil  
 Fessas, D., Italy  
 Figiel, P., Poland  
 Garcia-Sanchez, E., Mexico  
 Gazda, A., Poland  
 Georgarakis, K., Japan  
 Georgieva Bakalova, A., Bulgaria  
 Gingu, O., Romania  
 Gonçalves Mothé, C., Brazil  
 Gong, P., China  
 Graaf, G. H., The Netherlands  
 Grajcar, A., Poland  
 Grivel, J.-C., Denmark  
 Habibi, M. H., Iran  
 Hakan Atapek, Ş., Turkey  
 Halász, J., Hungary  
 Halász, L., Hungary  
 Hebda, M., Poland  
 Hosny, N., Egypt  
 Howell, B. A., USA  
 Hryha, E., Sweden  
 Ikeda, H., Japan  
 Irassar, E. F., Argentina  
 Jablonska-Wawrzycka, A., Poland  
 Jaiswar, G., India  
 Janotka, I., Slovakia  
 Jena, H., India  
 Jordan, R. B., Canada  
 Kalaei, M., Iran  
 Kamseu, E., France  
 Kelnar, I., Czech Republic  
 Khan Durrani, S., Pakistan  
 Klimm, D., Germany  
 Kobelnik, M., Brazil  
 Koga, N., Japan  
 Köse, D. A., Turkey  
 Krajnikova, A., Slovakia  
 Krunks, M., Estonia  
 Ksepko, E., Poland  
 Kucerik, J., Germany  
 Kumar Swamy, N., India  
 Kun, D., Hungary  
 Kuzema, P., Ukraine  
 Lastusaari, M., Finland  
 László, K., Hungary  
 Lazzara, G., Italy  
 Ledeti, A., Romania  
 Ledeti, I. V., Romania  
 Li, C.-H., China  
 Lin, C., China  
 Liu, J., China  
 Logvinenko, V. A., Russian Federation  
 Lysenko, E., Russian Federation  
 Lyszczyk, R., Poland  
 Ma, D., Germany  
 Macan, J., Croatia  
 Magdalena, A. G., Brazil  
 Magnone, E., Korea  
 Makowska, J., Poland  
 Maloney, T., Finland  
 Maskow, T., Germany  
 Matulis, D., Lithuania  
 Matuschek, G., Germany  
 Matusiak, M., Poland  
 Medved, J., Slovenia  
 Mendoza, O. A., Colombia  
 Mohamed, G. G., Egypt  
 Motoc, D. L., Romania  
 Mousavian, R. T., Iran  
 Mu, D. B., China  
 Muraleedharan, K., India  
 Muresan, L. E., Romania  
 Mustata, F., Romania

- Nakanishi, M., Japan  
Nep, E., Nigeria  
Niu, S.-L., China  
Nocun-Wczelik, W., Poland  
Oancea, D., Romania  
Olewnik-Kruszkowska, E., Poland  
Önal, M., Turkey  
Pacurariu, C., Romania  
Palou, M., Slovakia  
Pantoya, M., USA  
Paredes Zaldivar, M., Brazil  
Parisi, F., Italy  
Petrovic, S., Slovenia  
Pham Minh, D., France  
Pires, J., Portugal  
Piskin, S., Turkey  
Popa, F., Romania  
Popescu, C., Germany  
Popov, A., Russian Federation  
Predoana, L., Romania  
Restivo, T. A. G., Brazil  
Ribeiro, C. A., Brazil  
Riposan, I., Romania  
Ristić, I. S., Serbia  
Rivers, G. S. M., Canada  
Roduit, B., Switzerland  
Rogulska, M., Poland  
Rotaru, P., Romania  
Rouff, A., USA  
Ruhmann, R., Germany  
Rustu Yoruk, C., Estonia  
Rzaczynska, Z. M., Poland  
Sakis Bernardi, L., Brazil  
Samide, A., Romania  
Sato, Y., Japan  
Servant, C., France  
Šesták, J., Czech Republic  
Sgarlata, C., Italy  
Shaaban, E. R., Egypt  
Silva, R. A. G., Brazil  
Simkovic, I., Slovakia  
Sokolovskiy, A., Russian Federation  
Sokovykh, E., Ukraine  
Song, J., China  
Steiner Petrovic, D., Slovenia  
Stepanov, N., Russian Federation  
Stevulova, N., Slovakia  
Stoch, P., Poland  
Stoia, M. E., Romania  
Stonys, R., Lithuania  
Suplicz, A., Hungary  
Sydoruk, V., Ukraine  
Szabó-Révész, P., Hungary  
Szczęsny, R., Poland  
Szeluga, U., Poland  
Tabero, P., Poland  
Tábi, T., Hungary  
Terzić, A., Serbia  
Toplan, H. Ö., Turkey  
Toplan, N., Turkey  
Urbonas, L., Germany  
Vargha, V., Hungary  
Vesela, P., Czech Republic  
Vida-Simiti, I., Romania  
Vlaev, L., Bulgaria  
Vlase, G., Romania  
Vlase, T., Romania  
Wadsö, L., Sweden  
Wang, L., China  
Wang, N., China  
Wang, X., China  
Wang, Z., China  
Wei, D., China  
Winnefeld, F., Switzerland  
Worzakowska, M., Poland  
Yonemochi, E., Japan  
Zayed, M. A., Egypt  
Zeinali Heris, S., Iran  
Zemenová, P., Czech Republic  
Zhang, D., China  
Zhang, Y., China  
Zohory, M. M., Iran