

Preface

The 13th International Symposium on Novel Aromatic Compounds (ISNA-13) was held in Luxembourg City, Grand-Duchy of Luxembourg, the smallest country so far hosting a conference of the ISNA series. It took place 19–24 July 2009 and was attended by 360 participants, mostly from academic institutions, representing 34 countries. The scientific program consisted of the Opening Plenary Lecture given by Prof. Jean-Marie Lehn (Institute of Science and Supramolecular Engineering and Louis Pasteur University, Strasbourg), the 2009 Nozoe Lecture presented by Prof. Atsuhiko Osuka (Kyoto University, Kyoto), 34 invited lectures, 26 oral communications, and 194 posters presented in two sessions. In a public lecture, vice rector Prof. Lucienne Blessing presented the activities of the recently founded University of Luxembourg. The organizing committee made a strong and successful effort to attract numerous graduate and undergraduate students to ISNA-13.

The ISNA symposium series was launched by Prof. Tetsuo Nozoe in 1970 as the International Symposium on Nonbenzenoid Aromatic Compounds. Since then, the currently biennial conference rotates between Asia, North America, and Europe. As indicated by its present name, the focus of the symposium has broadened and is now set on new experimental and theoretical insights into the concept of aromaticity, synthesis and properties of novel aromatic compounds, as well as applications of π -conjugated systems in different fields of molecular science and technology. From a broader perspective, through interactions between participating scientists, ISNA conferences aim at the generation of new knowledge and its eventual application for the betterment of society.

In line with the above, the organizers of ISNA-13 emphasized not only the traditional and fundamental aspects of novel aromatic compounds, such as their theory, synthesis, structure, and properties, but also their application in materials science. This included, for example, macrocycles, oligomers, and polymers and their optoelectronic properties, supramolecular chemistry based on aromatic functional modules, aromatics on surfaces, and molecular electronics based on aromatic units. The main subjects of the meeting that are covered in this Special Topic issue are as follows:

- aromaticity and novel aromatic systems—theory
- aromaticity and novel aromatic systems—experimental
- fullerenes and concave aromatics*
- aromatic polymers and oligomers and their optoelectronic properties
- supramolecular aromatic devices, switches, and machines
- aromatics on surfaces, including graphene
- optoelectronics

*The cover illustration by Michio Yamada shows the X-ray crystal structure of cerium-encapsulating pyrrolidinometallofullerene [6,6]-Ce₂@I_h-C₈₀(CH₂)₂NTrt (Trt = trityl), presented by Prof. Takeshi Akasaka at ISNA-13 and discussed in the contribution “In-depth understanding of π -electron systems: New vistas in fullerene endohedrals” to the present Special Issue (original report by M. Yamada et al., *Chem.—Eur. J.* **15**, 10533, 2009). The molecule is depicted in front of the medieval Castle of Vianden, one of the largest and most beautiful feudal residences of the romanesque and gothic periods in Europe, the visit of which was part of the social program of ISNA-13.

The synchrotron X-ray crystallographic analysis of the endohedral metallofullerene revealed that the encapsulated Ce atoms are located at slantwise positions on the mirror plane that parallels the pyrrolidine ring. The metal sites obtained from paramagnetic NMR analysis and density functional calculations agree well with the X-ray structure. This work clearly shows that the position of metals inside fullerene cages can be controlled by means of exohedral chemical functionalization.

The next conference, ISNA-14, will be chaired by Profs. Michael M. Haley (University of Oregon, Eugene) and Benjamin T. King (University of Nevada, Reno) and will be held in Eugene, OR, USA, 24–29 July 2011. ISNA-15 will be organized by Prof. Ken-Tsung Wong (National Taiwan University) in Taipei, Taiwan.

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