Theor Chem Account (2008) 120:321–323
DOI 10.1007/s00214-008-0446-3

EDITORIAL

The 60th Birthday of Nino Russo

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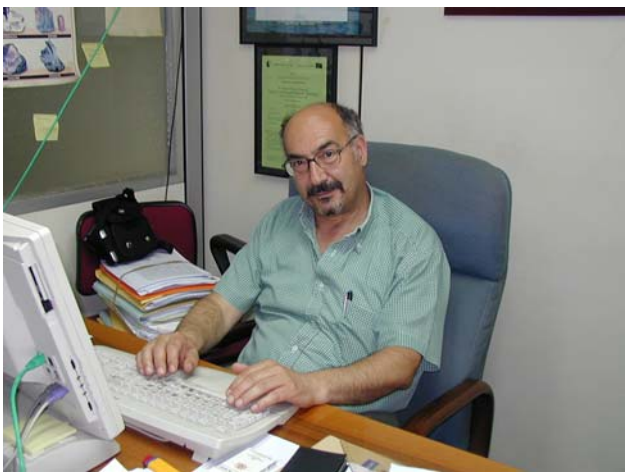
Received: 3 April 2008 / Accepted: 5 April 2008 / Published online: 22 April 2008



Nino Russo is Full Professor in General and Inorganic Chemistry at the Department of Chemistry of the University of Calabria, Italy, since 1995. He is the author of many important contributions in the field of Quantum Chemistry, which range from purely theoretical and methodological developments, to applications focused on the modelling of biological reactions and catalytic processes. More specifically, he has addressed problems in bio-inorganic chemistry, with emphasis on the study of the interaction between metal ions and biomolecules of different complexity; in inorganic chemistry, concerning the stability and vibrational spectra of coordination compounds; in enzymatic catalysis; and also problems in surface science, ranging from semiconductors to metal surfaces.

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He has been among the few Quantum Chemists who have promoted right from the beginning the Density Functional Theory in the theoretical chemistry community. In addition, he has contributed to develop and implement the Density Functional code deMon, one of the most widely used packages in computational chemistry.

He is the leader of a very active and internationally acknowledged research group. He is also very dynamic in the national context, with activities concerning innovation in didactic aspects, as well as the organization of schools and congresses: many of these have remained in the memory of participants not only for their scientific content, but also for the exceptional quality of the welcome. The Theoretical and Computational Chemistry laboratory which he directs is one of the most productive among those involved in the Center of Excellence for High Performance Computing, a supercomputing center aimed at performing research, developing applications and promoting the transfer of advanced information technologies and methodologies to the scientific community.

Professor Russo has also been extremely active in authoring books, supervising students, and receiving many guest scientists from all over the world at his research laboratory for longer or shorter periods. His scientific contributions in the field have been presented in more than 300 original publications.

In addition to his numerous scientific accomplishments, he has substantial administrative experience serving as Director of his Department from 2003 to 2006 and as Director of his University's Academic Press.

His interest in the Physics and Chemistry problems he works on is motivated by a strong desire to contribute to a general body of knowledge involving colleagues and co-workers in ambitious projects that have often met with great success.

It is a great pleasure for us to present here Dr. Nino Russo and to dedicate him this special issue in honour of his 60 years. Dr. Russo has many friends worldwide, and each one of them has his or her own view of his personality. Probably it will be difficult to mesh together into a presentation the different views, but we shall nevertheless try to convey a general idea. All of us are pleased of his friendship and his scientific collaboration, therefore, we think those who are not personally acquainted with Nino should know something about his person and about his role in the field of modern computational and theoretical chemistry.

Nino Russo was born on August 22, 1947 in Luzzi, a small Calabrian village on the western mountainsides of the Sila, where tradition locates the ancient "Lucanian Thebes". Ever since he was a boy, he lived with his family in the near Cosenza, where he received his undergraduate education. In 1966 he moved to Rome to study Chemistry at the "Sapienza" that was and still is one of the largest European and the most ancient of Rome's three state-funded universities. Here, under the supervision and the incitement of Professor Antonio Damiani, a skilful quantum chemist working in the field of macromolecules, he became keen on the theoretical analysis of the conformational aspects of biological systems, in the attempt to gain insights in their structure–activity relationship.

In Rome, he received his degree in Chemistry with full marks in 1971 defending a thesis on acetylcholine, in which a correlation between conformation and enzymatic specificity was explored. After the degree, he was a postdoc at the University of Groningen in the Netherlands, and at the "Université de Montréal" in Canada.

From 1981 to 1994 he was Associate Professor of Theoretical Chemistry at the Department of Chemistry of the University of Calabria. This period was marked by his insatiable curiosity for new developments in computational chemistry that took him as invited researcher or professor for long stages in many Universities both in Europe and worldwide.

At that time, the computational resources available at the Calabrian University were still insufficient; therefore, on his return he made every effort to equip a small but efficient laboratory, which by now has grown significantly, not only in terms of computational capabilities, but also in renown.

Meanwhile, his scientific projects began little by little to take off, and his small research group to become one of the most prolific in Italy. To this day his staff members manage with difficulty to keep pace with his tireless and volcanic activity.

His interest was mainly addressed to the development and application of the theoretical and computational density functional methods: in this context he and his co-workers invested in the implementation of the deMon code, especially for what concerns treatment of solvent effects in the framework of Onsager, Polarizable Continuum (PCM) and Reference Interaction Site models (RISM), and spin–orbit coupling contributions.

Since 1995 Nino Russo is Full Professor of General and Inorganic Chemistry at the Department of Chemistry of the University of Calabria; moreover, he has served on a number of academic offices: he was a member of the Administration Council for 6 years, Director of the Academic Press from 1996 to date, scientific responsible of several projects (Memobiomar, MIUR, Marine Ecology Cluster), responsible for the European Community Course Credit Transfer System (Chemistry project). From 2003 to 2006 he held the directorship of the Department of Chemistry of University of Calabria.

He is at present coordinator of the PhD program in "Metodologie Chimiche Inorganiche" of the Chemistry Department, which has hosted seminars by many specialists in the field. Many universities including Paris VI, Barcelona, Donostia, Sofia, Timisoara and Montreal, elected him as a member of the Scientific Committee for PhD degree.

Nino Russo was the director of a series of quadrennial meetings started in 1992 (the last of them held in 2002), which are known as the NATO-ASI schools, devoted to Metal–Ligand Interactions in chemistry, physics and biology. These events were a hit with the scientific community, apart from being a forum for new and important results. Among the other congresses organized or directed by him we can mention the "5th International conference on the applications of density functional theory in chemistry and physics"(Como, Italy, 1993), the "6th International conference on the applications of density functional theory in chemistry and physics" (Paris, France, 1995), the "Erasmus" Summer school "Topics in advanced physical chemistry" (Rende, Italy, 1998), the Workshop on "Recent development of DFT and related computer codes" (Lyon, France 1994).

Thanks to his numerous contacts in foreign countries, he built a series of collaborations that have allowed to expand the knowledge in many fields of theoretical chemistry, and continue to breathe fresh life into his research. Several visitors, both students and skilled professor, during their stays have enriched his group with their ideas and talent.

However, the interaction with Nino has represented a major source of inspiration for a large number of students in quantum chemistry. Most of the authors of this text, now university teachers, were at one time just some of those students; the one author who was a colleague from the beginning shares the same fond remembrance of those times, and the same esteem for the subsequent developments of Nino's scientific career.

Meanwhile, the Laboratory of Theoretical and Computational Chemistry directed by Nino has become one of the four members of the "Centre of Excellence for Parallel and distributed high performance computer centre" created by

the Italian Ministry of Education and University (MIUR) in 2001. The affiliation to this selective Centre was acknowledged, in Italy as well as in other countries, as a clear indication of the quality of his research.

At present, Nino's group is focusing on the description of reactions mechanisms such as enzymatic processes and transition metals-based catalysis; furthermore, it is interested in the determination of the properties of bio-inorganic systems. Another area which is currently being explored is the study of the properties of compounds used in the photodynamic therapy.

During his career, Nino Russo has published as author or co-author something like 300 articles, and has been co-editor of about ten books; moreover, the results of his scientific activity have been presented in many invited national and international lectures.

All the authors of this text, who were also the promoters of this special issue, wish to express their thanks to all who have supported this initiative by sending their personal contributions. In this way, we all intend to honour a scientist for his outstanding work, for the inspiration that he has provided, and for the attractive and stimulating research environment that he has been able to create. Finally, we wish Nino to continue for many, years to be dynamic and productive, and to keep contributing to the recognition of our research field as he has done until now.