Preface

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The 8th International Conference on Pulse Investigations in Chemistry, Biology and Physics (PULS'2008) took place from 6th to 12th September 2008 in Krakow, Poland. This time, the Conference was jointly organized by the Institute of Applied Radiation Chemistry (TU Lodz, Poland) and the Institute of Nuclear Chemistry and Technology (Warsaw, Poland).

The conference gathered almost 80 scientists from Europe, USA, India, Japan, Chile, Australia and New Zealand. According to the will of all participants, the PULS'2008 Conference was dedicated to Prof. David A. Armstrong, who passed away on 24th July 2006.

The very broad scope of the conference topics is very well illustrated with the list of invited lectures delivered:

1. Use of free-radical chemistry in mechanistic studies to combat disease *by Robert ANDERSON*
2. Mechanistic studies on the C–C bond cleavage reactions of arylcarbinyloxyl radicals *by Massimo BIETTI*
3. Radiation damage in proteins: theoretical aspects *by Ian CARMICHAEL*
4. One-electron reduction of 8-bromopurine nucleosides and excess electron transfer through DNA *by Chrysostomos CHATGILIALOGLU*
5. Solvation structure and dynamics of water and ionic liquids studied by time-resolved X-ray and optical spectroscopy *by Robert CROWELL*
6. Opportunities in real-time chemistry in solution using picosecond X-ray diffraction *by Jan DAVIDSSON*

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7. Novel carbon nanostructures—time-resolved radiolytic and photolytic investigations *by Dirk GULDI*
8. Free-radical reactions in cyclic dipeptides containing methionine *by Gordon L. HUG*
9. Effect of $-OH$ bound density in the solvation dynamics of electron in polyols *by Mehran MOSTAFAVI*
10. Bimolecular vs. monomolecular reactions of the radiolytically generated cation radicals in an inert matrix *by Sergey NAUMOV*
11. Redox reactions of the 21st amino acid, selenocysteine *by Thomas NAUSER*
12. Charge dynamics in organic crystals, supermolecules, and dendrimers *by Akinori SAEKI*
13. Chemical dynamics using laser photolysis–laser induced fluorescence *by Sisir K. SARKAR*
14. Inelastic interactions of electrons with biomolecules: from gas phase to complexes and clusters *by Paul SCHEIER*
15. The catalytic role of thiyl radicals in peptide and protein damage *by Christian SCHÖNEICH*
16. Ultrafast exciton and charge carrier dynamics in quantum dots and organic materials for opto-electronic applications *by Laurens SIEBBELES*
17. Novel time-resolved techniques for studying hydrogen-bonded systems *by Jacek WALUK*
18. Pulse radiolysis studies of the chemistry of probes for ‘Reactive oxygen species’ and of the enhancement of radiation-induced cell killing by nitric oxide *by Peter WARDMAN*
19. Ultrafast studies of electron scavenging in ionic liquids *by James F. WISHART*
20. Experimental studies of electron transfer within DNA *by Marian WOLSZCZAK*
21. Chemical bond cleavage studied by laser flash photolysis and pulse radiolysis *by Minoru YAMAJI*
22. Photo-oxidation of methionine and its derivatives studied by time-resolved CIDNP *by Alexandra V. YURKOVSKAYA*
23. Tetrathiomolybdate—a potent drug and a radical scavenger *by Israel ZILBERMANN*

Invited lectures were accompanied by ten oral and over 30 poster presentations. The Editors of this Journal kindly agreed to publish the special issue presenting original papers based on some of the conference presentations. We hope that they will be of interest to a wide scientific community. The collection was done by the Guest Editors and all papers were peer-reviewed.

The Conference was successful due to its high scientific level and by devoting a lot of time for discussions. It was also successful due to the interesting social events, including an excursion to the famous ‘Wieliczka’ salt mine and the conference banquet, which took place in a salt chamber 137 m under ground level.

On behalf of the Organizing Committee, we would like to thank all of the participants for attending and their active participation and for the friendly atmosphere which they created.