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Preface to the *Proceedings of the XXVI International Conference on Photonic, Electronic and Atomic Collisions*

Ann Orel
University of California-Davis

Anthony F. Starace
University of Nebraska-Lincoln, astarace1@unl.edu

Dragan Nikolić
Western Michigan University

Nora Berrah
Western Michigan University

Thomas Gorczyca
Western Michigan University

See next page for additional authors

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Authors

Ann Orel, Anthony F. Starace, Dragan Nikolić, Nora Berrah, Thomas Gorczyca, Emanuel Kamber, and John A. Tanis

PREFACE

The XXVIth International Conference on Photonic, Electronic and Atomic Collisions was held on the campus of Western Michigan University (WMU) in Kalamazoo during 22-28 July 2009. Kalamazoo, the home of a major state university amid pleasant surroundings, was a delightful place for the conference. The 473 scientific participants, 111 of whom were students, had many fruitful discussions and exchanges that contributed to the success of the conference. Participants from 43 countries made the conference truly international in scope.

The 590 abstracts that were presented on the first four days formed the heart of the conference and provided ample opportunity for discussion. This change, allowing the conference to end with invited talks, was a departure from the format used at previous ICPEAC gatherings in which the conferences ended with a poster session. The abstracts were split almost equally between the three main conference areas, i.e., photonic, electronic, and atomic collisions, and the posters were distributed across the days of the conference so that approximately equal numbers of abstracts in the different areas were scheduled for each day. Of the total number of presented abstracts, 517 of these are included in this proceedings volume, the first time that abstracts have been published by ICPEAC.

There were 5 plenary lectures covering the different areas of the conference: Paul Corkum (*University of Ottawa*) talked on attosecond physics with atoms and molecules, Serge Haroche (*Collège de France*) on non-destructive photon counting, Toshiyuki Azuma (*Tokyo Metropolitan University*) on resonant coherent excitation of highly-charged ions in crystals, Eva Lindroth (*Stockholm University*) on atomic structure effects, and Alfred Müller (*Justus Liebig University*) on resonance phenomena in electron- and photon-ion collisions. Two speakers gave very illuminating public lectures that drew many people from the local area, as well as conference participants: Patricia Dehmer (*U.S. DOE*) gave a talk on "*Facing Our Energy Challenges in a New Era of Science*," and William Phillips (Nobel laureate, *NIST*) presented a talk on "*Time, Einstein, and the Coolest Stuff in the Universe*." These public talks, held on Thursday and Friday evenings, respectively, were very accessible to a general audience. In addition, there were 61 progress reports on ongoing current research, and 26 special reports selected from the submitted abstracts based on their relevance and importance. These talks covered the full range of the conference topics.

Notably, this was the 50th anniversary of ICPEAC and a formal session was held the first day to honor the event as well as those who were instrumental in initiating the conference. Thirteen scientists, representing both those from the early days of ICPEAC as well as chairs of previous ICPEACs, were present and called to the stage, including Benjamin Bederson, Lewis Branscomb, Robert Crompton, Alexander Dalgarno, Gordon Dunn, Werner Eissner, Brian Gilbody, Edward Gerjuoy, Hartmut Hotop, Eugen Merzbacher, Eugene Rudd, Felix Smith, and Aaron Temkin. Steven Manson was the chair of the session and he introduced those present from the early days. Joachim Burgdörfer presented an overview of the history of ICPEAC. This session was followed by a special anniversary reception to honor all of the early "ICPEACers".

Generous support for the conference was provided by IUPAP, the WMU President's office, and the National Science Foundation. The funds were sizeable, timely, and greatly appreciated, and permitted us to support a significant number of young scientists (postdocs and students) and persons from developing/disadvantaged countries. Nevertheless, the number of requests was far greater than the total support available (by about a factor of five!), and we had to turn down many financial requests. We encourage the organizers of the next ICPEAC to seek a higher level of funding for supporting young scientists and scientists from developing/disadvantaged countries.

All in all, the XXVIth ICPEAC in Kalamazoo was very successful. The plenary lectures and the progress and special reports bridged the gap between the different fields of collision physics, making it possible for non-experts in a given area to gain insight into new areas. Also, included among the speakers were several young scientists, namely, postdocs and students, who brought new perspectives to their fields. The next ICPEAC will take place in Belfast in 2011, and the ones after that will be in Lanzhou in 2013 and Madrid in 2015. Given the rapidity with which science is advancing in all of the areas covered by ICPEAC, we expect that these future ICPEAC conferences will be as stimulating as this most recent one was, as indicated by the contributions presented in this proceedings volume.

Ann Orel, *University of California-Davis*

Anthony F. Starace, *University of Nebraska-Lincoln*

Dragan Nikolić, *Western Michigan University*

Nora Berrah, *Western Michigan University*

Thomas Gorczyca, *Western Michigan University*

Emanuel Kamber, *Western Michigan University*

John A. Tanis, *Western Michigan University*

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joachim.burgdoerfer@tuwien.ac.at

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dominique.vernhet@insp.jussieu.fr

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cederquist@physto.se

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Yasunori Yamazaki
Graduate School of Arts and Sciences
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JAPAN
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Previous Proceedings

International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC)

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XXV	2007	Freiburg, Germany	Journal of Physics Conf. Series	1742-6596
XXIV	2005	Rosaria, Argentina	World Scientific	981-270-412-4
XXIII	2003	Stockholm, Sweden	Physica Scripta T110	91-89621-16-6
XXII	2001	Santa Fe, USA	Rinton Press	1-58949-018-5
XXI	1999	Sendai, Japan	AIP Conference Proceedings 500	1-56396-777-4
XX	1997	Vienna, Austria	World Scientific	981-02-3425-2
XIX	1995	Whistler, Canada	AIP Conference Proceedings 360	1-56396-440-6
XVIII	1993	Aarhus, Denmark	AIP Conference Proceedings 295	1-56396-290-X
XVII	1991	Brisbane, Australia	Adam Hilger	0-7503-0167-8
XVI	1989	New York, USA	AIP Conference Proceedings 205	0-88318-390-0
XV	1987	Brighton, England	North Holland/Elsevier	0-444-87083-0
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X	1977	Paris, France	North Holland	0-444-85003-1
IX	1975	Seattle, USA	University of Washington Press	0-295-95455-8
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