



## Editorial

## Elsevier/Spectrochimica Acta Atomic Spectroscopy Award 2010

This is to announce the 2010 Elsevier/Spectrochimica Acta Award, the annual award honoring the most significant article(s) published in a volume. Elsevier makes this award on behalf of Spectrochimica Acta, Part B, to encourage the publication of top articles in this journal. All papers published during one year are considered for this award and the Editorial Advisory Board and the Guest Editor(s) of the special issues are responsible for the selection. The award consists of a monetary prize of \$1000 together with a presentation certificate.

We have the pleasure to announce the 2010 Award for the articles published in Spectrochimica Acta Part B, Volume 65. The votes of the jury accumulated for a paper discussing critically the statements commonly made in the literature regarding the existence of local thermodynamic equilibrium in laser-induced plasmas. The paper pointed out the main criteria to be fulfilled to validate this assumption and concluded that the mere use of the McWhirter criterion should be discontinued. The work resulted from collaboration between the CNR of Pisa (Italy), the University of Bari (Italy), the CNR-IMP of Bari (Italy) and the University of Florida, Gainesville (USA).

The paper selected for the Award is the following:

*G. Cristoforetti, A. De Giacomo, M. Dell'Aglio, S. Legnaioli, E. Tognoni, V. Palleschi, N. Omenetto*

*Views and Criticism: Local Thermodynamic Equilibrium in Laser-Induced Breakdown Spectroscopy: Beyond the McWhirter criterion.* Spectrochim. Acta Part B 65 (2010) 86–95.

Three other papers closely followed the above paper. These papers deal with calibration in atomic spectrometry, a topic of essential analytical relevance for all atomic spectroscopic techniques, one paper on imaging of aerosols particles formed by laser ablation and one paper on the mechanism of plasma formation after resonance laser excitation of cesium vapors.

These papers are:

*J.M. Mermet*

*Review: Calibration in atomic spectrometry: A tutorial review dealing with quality criteria, weighting procedures and possible curvatures.*

Spectrochim. Acta Part B 65 (2010) 509–523.

*J. Koch, S. Heiroth, T. Lippert, D. Günther*

*Femtosecond laser ablation: Visualization of the aerosol formation process by light scattering and shadowgraphic imaging.*

Spectrochim. Acta Part B 65 (2010) 943–949.

*C. Vadla, V. Horvatic, D. Veza, K. Niemax*

*Resonantly laser-induced plasmas in gases: The role of energy pooling and exothermic collisions in plasma breakdown and heating.* Spectrochim. Acta Part B 65 (2010) 33–45.

As usual, since the introduction of the award, many other papers scored high on the jury's list. For the 2010 volume, this list, in alphabetical order of the first authors, looks as follows:

*A. D'Ulivo*

*Review: Mechanism of generation of volatile species by aqueous boranes: Towards the clarification of most controversial aspects.*

Spectrochim. Acta Part B 65 (2010) 360–375.

*A. De Giacomo, R. Gaudio, M. Dell'Aglio, A. Santagata*

*The role of continuum radiation in laser-induced plasma spectroscopy.* Spectrochim. Acta Part B 65 (2010) 385–394.

*R. Glaus, R. Kaegi, F. Krumeich, D. Günther*

*Phenomenological studies on structure and elemental composition of nanosecond and femtosecond laser-generated aerosols with implications on laser ablation inductively coupled plasma spectrometry.*

Spectrochim. Acta Part B 65 (2010) 812–822.

*M. Grotti, J.L. Todolí, J.-M. Mermet*

*Influence of the operating parameters and of the sample introduction system on time correlation of line intensities using an axially viewed, CCD-based inductively coupled plasma optical emission spectroscopy system.*

Spectrochim. Acta Part B 65 (2010) 137–146.

*M. Ivković, M.A. Gonzalez, S. Jovičević, M.A. Gigoso, N. Konjević*

*A simple line shape technique for electron number density diagnostics of helium and helium-seeded plasmas.*

Spectrochim. Acta Part B 65 (2010) 234–240.

*M. Ribière, B.G. Chéron*

*Analysis of relaxing laser-induced plasmas by absorption spectroscopy: Toward a new quantitative diagnostic technique.*

Spectrochim. Acta Part B 65 (2010) 524–532.

*C.M. Sparks, U.E.A. Fittschen, G.J. Havrilla*

*Picoliter solution deposition for total reflection X-ray fluorescence analysis of semiconductor samples.*

Spectrochim. Acta Part B 65 (2010) 805–811.

*E. Tognoni, G. Cristoforetti, S. Legnaioli, V. Palleschi*

*Review: Calibration-free laser-induced breakdown spectroscopy: State of the art.*

Spectrochim. Acta Part B 65 (2010) 1–14.

*T. Tomie*

*The birth of the X-ray refractive lens.*

Spectrochim. Acta Part B 65 (2010) 192–198.

The editors note that the paper chosen for the award belongs to the category *Views and Criticism*, indicating the usefulness of this section of our journal. We would therefore like to draw the authors' attention to the opportunity of using this forum of scientific debate on topics of spectrochemical interest. Moreover, three other *Review* papers have been nominated and received high scores: this is gratifying for our reviews editors and their efforts, which we gratefully acknowledge.

Finally, we point out that X-ray papers, which play a relevant part among those submitted to the journal, have also been considered as candidates for the award.

As in the past, the task of choosing the most significant contribution from the annual publications was difficult, demonstrating once again the high standard of *Spectrochimica Acta Part B*. We thank the authors, the reviewers and the advisory board for their continuous support.

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Greet de Loos