

# Sid Ahmed BELDJILALI, PhD

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Born December 02, 1976 in Oran, Algeria  
Married, 3 children  
Algerian Citizenship

## Associate Professor, Section A

### Professional address:

LPPMCA – Plasmas Physics, Conductive Materials and their Applications  
Laboratory,  
Department of Energy Physics, Faculty of Physics  
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### EDUCATION

22/11/2017 | **Habilitation HDR**

12/2005 – 06/2011 | **Doctorate. in Sciences (PhD) in Materials Physics & Plasmas,**  
University of Sciences and of Technology of Oran – USTO-MB, Oran, Algeria  
LPPMCA – Plasmas Physics, Conductive materials and their applications laboratory

12/2002 - 06/2005 | **Magister. in Photonics and matter,**  
University of Sciences and of Technology of Oran – USTO-MB, Oran, Algeria  
LPPMCA – Plasmas Physics, Conductive materials and their applications laboratory

### TEACHING EXPERIENCE

12/2005 - Now | Associate professor A, University of Sciences and of Technology of Oran Mohamed Boudiaf–  
USTOMB, Oran, Algeria.  
Analytical mechanics – Electricity – Atomic physics – Optics – Biophysics – Plasma Physics – Laser plasma  
Interaction – Spectroscopy.

### COMPETENCIES

#### Scientific skills |

- **Laser-matter interaction** : nanosecond laser processes, femtosecond laser, free-calibration modeling.
- **Optical instrumentation** : fast imaging, time- and space-resolved emission spectroscopy,  
Optical microscopy, Interference microscope,...
- **Chemical processes**: Glove box, Pellet preparation

### COMPETENCIES

## A. Publications

### Published papers

[A01] Sid Ahmed Beldjilali, Emanuel Axente, Ahmed Belasri, Tewfik Baba-Hamed, and Jörg Hermann, Compositional analysis of drugs by laser-induced breakdown spectroscopy, J Appl Spectrosc. 83, No 5 (2017).

[A02] M. Achouri, T. Baba-Hamed, S. A. Beldjilali, and A. Belasri, Determination of a brass alloy concentration composition using calibration-free laser-induced breakdown spectroscopy, Plasma Physics Reports., 41(9), 758–768 (2015).

- [A03] E. Axente, G. Socol, S. A. Beldjilali, L. Mercadier, C. R. Luculescu, L. M. Trinca, A. C. Galca, D. Pantelica, P. Ionescu, N. Becherescu, J. Hermann, V. Craciun, *Quantitative analysis of amorphous indium zinc oxide thin films synthesized by Combinatorial Pulsed Laser Deposition*, Appl. Phys. A 117 (2014) 229–236.
- [A04] E. Axente, J. Hermann, G. Socol, L. Mercadier, S. A. Beldjilali, M. Cirisan, C. Luculescu, C. Ristoscu, I. Mihailescu, V. Craciun, Accurate analysis of indium-zinc oxide thin films via laser-induced breakdown spectroscopy based on plasma modeling, J. Anal. At. Spectrom. 29 (2013) 553-564.
- [A05] W. L. Yip, E. Mothe, S. A. Beldjilali, J. Hermann, Accumulation of air in polymeric materials investigated by laser-induced breakdown spectroscopy, J. Appl. Phys. 111 (2012) 063108.
- [A06] A. C. Popescu, S. A. Beldjilali, G. Socol, V. Craciun, I. N. Mihailescu, J. Hermann, *Analysis of indium zinc oxide thin films via laser-induced breakdown spectroscopy*, J. Appl. Phys. 110 (2011) 083116.
- [A07] S. A. Beldjilali, J. Hermann, T. Baba-Hamed, A. Belasri, *Analyses of plasmas produced by laser ablation of fresh aliments*, Advanced Materials Research. 227 (2011) 49–52
- [A08] S. A. Beldjilali, W. L. Yip, J. Hermann, T. Baba-Hamed, A. Belasri, *Investigation of plasmas produced by laser ablation using single- and double-pulses for food analysis demonstrated by probing potato skins*, Anal Bioanal Chem. 400 (2011) 2173–2183.
- [A09] S. A. Beldjilali, D. Borivent, L. Mercadier, E. Mothe, G. Clair, J. Hermann, *Evaluation of minor element concentrations in potatoes using laser-induced breakdown spectroscopy*, Spectrochimica Acta Part B 65 (2010) 727–733.

## B. International Presentations

- [B01] Imène Medjahed, Sid Ahmed Beldjilali, Ahmed Belasri, Bruno Caillier et Philippe Guillot, Etude de l'évolution spatiale et temporelle d'une lampe plasma de décharge à barrière diélectrique (Xe-Ne), Congrès de Physique et Chimie Quantique CPCQ 2017, Université Mouloud Mammeri Tizi-ouzou, Algeria (2017)
- [B02] Bruno Caillier, Philippe Guillot, Imene Medjahed, Sid Ahmed Beldjilali, Ahmed Belasri, Spatial and temporal evolution of a DBD plasma lamp, IEEE International Conference on Plasma Science (ICOPS), 2016, Alberta, Canada, DOI: 10.1109/PLASMA.2016.7534274 (2016)
- [B03] Sid Ahmed Beldjilali, Houaming Hou, Rick Russo, Vassilia Zorba, Chemical analysis of electrode/electrolyte interfaces with femtosecond LIBS, 8<sup>TH</sup> EURO-MEDITERRANEAN SYMPOSIUM ON LASER-INDUCED BREAKDOWN SPECTROSCOPY 2015, At Linz / Austria (2015).
- [B04] D. Besseghier, S. A. Beldjilali, F. Bencherif, A. Belasri, Laser- induced breakdown spectroscopy applied to material analysis, The 1st Workshop on Matter and Radiation WMR'2016, Université de Betna (2016).
- [B05] H. DEROUICHE, S. A. Beldjilali, D. Besseghier, A. Belasri, ANALYSIS OF SILICON BY LASER- INDUCED BREAKDOWN SPECTROSCOPY., The 1st Workshop on Matter and Radiation WMR'2016, Université de Betna (2016).
- [B06] F. Bencherif, S. A. Beldjilali, D. Besseghier, T. Baba-Hamed, A. Belasri, INVESTIGATION AND APPLICATIONS OF LASER-INDUCED PLASMA SPECTROSCOPY TECHNIQUE LIBS, The 1st Workshop on Matter and Radiation WMR'2016, Université de Betna (2016).
- [B07] S. A. Beldjilali, J. Hermann, T. Baba-Hamed, A. Belasri, TIME RESOLVED LASER INDUCED BREAKDOWN SPECTROSCOPY STUDIES OF ORGANIC MATERIALS, 2ème workshop LAAR'15 sur la physique du rayonnement et ses applications, November 3-5, 2015, USTO-MB Oran, Alegria (2015).
- [B08] I. Kaci, S. A. Beldjilali, A. Belasri, J. Hermann, Laser-induced breakdown spectroscopy applied to steel analysis, 2ème workshop LAAR'15 sur la physique du rayonnement et ses applications, November 3-5, 2015, USTO-MB Oran, Alegria (2015).
- [B09] S. A. Beldjilali, J. Hermann, T. Baba-Hamed, A. Belasri, LASER-INDUCED BREAKDOWN SPECTROSCOPY APPLIED TO ORGANIC MATERIALS ANALYSIS, Journées de l'Année Internationale de la Lumière JAIL'2015 15-16 Avril 2015, USTO-MB Oran, Alegria (2015).