

---

**BIOGRAPHICAL SKETCH**


---

NAME: Baudelet, Matthieu

POSITION TITLE: Associate Professor of Chemistry

## EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Lille (France)	BS	06/2003	Physics
University of Lyon (France)	MS	06/2005	Physics
University of Lyon (France)	PhD	06/2008	Physics/Plasma Spectroscopy

**Positions, Scientific Appointments, and Honors****Positions and Scientific Appointments**

2020 – Present	Associate Professor, University of Central Florida Department of Chemistry/National Center for Forensic Science, Orlando, FL, USA
2015 – Present	Secondary Joint Appointment, CREOL – The College of Optics and Photonics, University of Central Florida, FL, USA
2015 – 2020	Assistant Professor, University of Central Florida Department of Chemistry/National Center for Forensic Science, Orlando, FL, USA
2013 – 2015	Secondary Joint Appointment, National Center for Forensic Science, University of Central Florida, FL, USA
2012 – 2015	Assistant Research Professor, CREOL – The College of Optics and Photonics/Townes Laser Institute, University of Central Florida, FL, USA
2008 – 2012	Senior Research Scientist, CREOL – The College of Optics and Photonics/Townes Laser Institute, University of Central Florida, FL, USA
2019 – present	Advisory Board member of the RSC Journal of Atomic Analytical Spectrometry
2015 – 2017	President of the North American Society for Laser-Induced Breakdown Spectroscopy
2014 – present	Editorial Advisory Board member for Spectroscopy magazine
2012 – Present	Member, North American Society for Laser-Induced Breakdown Spectroscopy
2011 – Present	Member, Society for Applied Spectroscopy
2017 – present	Member of the scientific advisory board of Ablatom
2016 – present	Member of the scientific advisory board of Elemission

**Honors**

2012 – 2013	UCF Research Millionaire
2012 – 2014	UCF Innovator

## **Contributions to Science Products Most Closely Related to the Proposed Project**

David S.H Funes, Kaitlyn Bonilla, Mathieu Baudelet, Candice Bridge, "Morphological and chemical profiling for forensic hair examination: A review of quantitative methods.", *Forensic Science International*, 2023, 111622

Luz Kelley, Elizabeth Rose, Bryan McCullough, Mauro Martinez, Matthieu Baudelet, "Non-destructive DNA analysis of single pollen grains", *Forensic Chemistry*, Volume 20, 2020, 100275

Martinez, M., Baudelet, M. Calibration strategies for elemental analysis of biological samples by LA-ICP-MS and LIBS – A review. *Anal Bioanal Chem* 412, 27–36 (2020).

M. Martinez and M. Baudelet, Matrix-matched calibration material for zinc analysis of human nails by laser-induced breakdown spectroscopy, *Spectrochimica Acta Part B: Atomic Spectroscopy* (2019), 163, 105732,

Mauro Martinez, Courtney Bayne, Dylan Aiello, Matthew Julian, Romain Gaume, Matthieu Baudelet, "Multi-elemental matrix-matched calcium hydroxyapatite reference materials for laser ablation: evaluation on teeth by Laser-Induced Breakdown Spectroscopy", *Spectrochimica Acta part B*, 2019, 159, 105650

Jessica Chappell, Mauro Martinez, Matthieu Baudelet, "Statistical evaluation of spectral interferences in LIBS", *Spectrochimica Acta part B*, 149, 167-175 (2018)

Sudeep Jung Pandey, Richard Locke, Romain Gaume, Matthieu Baudelet, "Effect of powder compact density on the LIBS analysis of Ni impurities in alumina powders", *Spectrochimica Acta part B*, 148, 99-104 (2018)

Matthieu Baudelet, "Quantitative elemental profiling in optical emission spectroscopy", US Patent US 10,001,410 B2 (2018)

S.J. Pandey, M. Martinez, F. Pelascini, V. Motto-Ros, M. Baudelet, R.M. Gaume. "Quantification of non-stoichiometry in YAG ceramics using laser-induced breakdown spectroscopy", *Optical Materials Express*, 7(2), 627-632 (2017)

## **Other Significant Products, Whether or Not Related to the Proposed Project**

Shelby R. Khandasammy, Lenka Halámková, Matthieu Baudelet, Igor K. Lednev, "Identification and highly selective differentiation of organic gunshot residues utilizing their elemental and molecular signatures", *Spectrochimica Acta part A*, 122316 (2023)

John Lucchi, Dan Gluck, Sidney Rials, Larry Tang, and Matthieu Baudelet, "Tire Classification by Elemental Signatures Using Laser-Induced Breakdown Spectroscopy," *Appl. Spectrosc.* 75, 747-752 (2021)

Lucchi J, Martinez M, Baudelet M. Homogenization of Plasma Emission Collection for Multichannel Spectrometers. *Applied Spectroscopy*. 2019;73(10):1228-1236

Matthieu Baudelet (Editor), "Laser Spectroscopy for Sensing: Fundamentals, Techniques and Applications", Woodhead Publishing (2014)

**Complete List of Published Work in Google Scholar: [Matthieu Baudelet's Google Scholar Profile](#)**