

Elise GHIBAUDO
Associate Professor

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40 years old
married
2 children

Current Position

Associate Professor at the University Grenoble Alpes (UGA), France
Research in the PHOTO group of IMEP-LAHC

Visiting Researcher at the University of Texas at Austin
Delia Milliron Group – McKetta Department of Chemical Engineering

Education

Grenoble - INP	Ph.D	Integrated Optics	2003
Grenoble – INP	M.S.	Optics	2000
Grenoble - INP	Eng. degree	Physics	2000

Research Experience

Associate Professor 2004-present
IMEP-LAHC

Research on integrated optics on glass and expertise on ion-exchange processes (studies for Saint Gobain Glass France, Alcatel Alenia Space, Thales Avionics); Integrated devices for signal processing and sensing. Graduated 5 PhD students and 3 MS student. Current advisor of 1 PhD student.

Postdoctoral Researcher 2003-2004
CCADET – University of Mexico (UNAM)

Development of a gas sensor based on a prism coupling. The gas sensing element was a TiO₂ crystalline layer deposited on a glass substrate.

Graduate Research Fellow 2000-2003
IMEP-LAHC

Study of an integrated optics wide-band duplexer. The design and modeling of the device were based on a non-resonant effect ensuring a wide-band behavior. The realization by an ion-exchange on glass process and the characterization were also carried out.

Research Proposal and Journal Review Activities

Scientific expertise for the French National Research Agency (ANR)
Reviewer for Applied Optics (OSA Publishing)

Committee Member

Scientific committee member, Symposium “Advances on functional doped glasses”, EMRS 2014 Fall Meeting
Selection board member, Associate Professor positions in French universities (2014 and 2015).

Administrative appointments

Department of Electrical Engineering and Industrial Computing, Institute of Technology, Grenoble, France:
Master of the 2nd year students (2006 – 2012)
Master of the students practising sport at high-level (since 2012)

Teaching Experience

Institute of Technology – Joseph Fourier University, Grenoble France:

Public: Bachelor Students in Electrical Engineering and Industrial Computing
Mathematics
Optical Telecommunications
Introduction to Microelectronic Technology
Practical Sessions in Clean Room (transistor fabrication)

Master of Research on Optics and Radiofrequency – Grenoble Institute of Technology

Public: Postgraduate Students
Ray optics

Publications and Patents

4 Patents :

«*System for transmitting optical signals*», T. Nappez, E. Ghibaudo, P. Rondeau, J.P. Schlotterbeck and J.E. Broquin, Patent number : EP2692032 (A1)

«*Optical signal emission system*», T. Nappez, E. Ghibaudo, P. Rondeau, J.P. Schlotterbeck and J.E. Broquin, Patent number : EP2685574 (A1)

«*Composition de verre pour échange ionique au thallium et substrat en verre obtenu*», J. Lalande, J. Sellier, A. Huignard and A. Najar; E. Ghibaudo et JE Broquin, Patent number : FR2936794 (A1)

«*Dispositif optique rotateur de polarisation intégré dans un substrat de verre et procédé de fabrication de ce dispositif*», François PARSY, Elise GHIBAUDO, Jean-Emmanuel BROQUIN, Publication number : 3006453 (A1)

13 Peer-Reviewed Articles and 17 Conference Proceedings (10 most recent below)

E. Jordan, F. Geoffray, A. Bouchard, E. Ghibaudo and J.-E. Broquin «*Development of Tl⁺/Na⁺ ion-exchanged single-mode waveguides on silicate glass for visible-blue wavelengths applications*», *Ceram. Int.*, vol 41 (6), 7996-8001, (July, 2015).

Jean Philippe Garayt ; François Parsy ; Damien Jamon ; Sophie Neveu ; François Royer ; Elise Ghibaudo ; Jean-Emmanuel Broquin, «*Efficient magneto-optical mode converter on glass*», *Proc. SPIE*, 8988, 89880F (march 2014)

F. Parsy, E. Ghibaudo, F. Royer, D. Jamon and J. E. Broquin, «*Integrated Broadband Polarization Splitters Made by Ion-Exchange on Glass*», *IEEE Photon. Technol. Lett.*, vol 25, issue 23, 2373-2376, (Dec 2013)

D. Jamon, F. Royer, F. Parsy, E. Ghibaudo and J. E. Broquin, «*Birefringence Measurements in Optical Waveguides*», *IEEE J. Lightw. Technol.*, 31 (19), 3151-3157, (Oct 2013)

A. Quaranta, A. Rahman, G. Mariotto, C. Maurizio, E. Trave, F. Gonella, E. Cattaruzza, E. Ghibaudo, and J. E. Broquin, «*Spectroscopic Investigation of Structural Rearrangements in Silver Ion-Exchanged Silicate Glasses*», *J. Phys. Chem. C*, **116**, 3757-3764, (2012)

L. Onestas, D. Bucci, E. Ghibaudo, and J.-E. Broquin, «*Vertically Integrated Broadband Duplexer for Erbium-Doped Waveguide Amplifiers Made by Ion Exchange on Glass*», *IEEE Photon. Technol. Lett.*, vol 23, issue 10, 648-650, (May 2011)

C. Maurizio, A. Quaranta, E. Ghibaudo, F. D'Acapito, and J.-E. Broquin, «*Ag Site in Ag-for-Na Ion-Exchanged Borosilicate and Germanate Glass Waveguides*», *J. Phys. Chem. C*, **113**, 8930-8937, (May 2009)

J. Grelin, A. Bouchard, E. Ghibaudo, J.-E. Broquin, «*Study of Ag⁺/Na⁺ ion exchange diffusion on germanate glasses: Realization of single-mode waveguides at the wavelength of 1.55 μm* », *Material Science and Engineering B*, vol 149, issue 2, pp 190-194, (Mars 2008)

J. Grelin, E. Ghibaudo, J.-E. Broquin, «*Study of deeply buried waveguides: A way towards 3D integration*», *Material Science and Engineering B*, vol 149, issue 2, pp 185-189, (Mars 2008)

C. Maurizio, F. D'Acapito, E. Ghibaudo, J.E. Broquin, «*Tl ion-exchange borosilicate glass: investigation of the Tl site by X-ray absorption spectroscopy*», *J. Non Cryst. Solids*, **354**, 124-128, (2008)