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Georges Boulon

Emeritus Professor

SUPERVISOR AND CO-SUPERVISOR OF PhD STUDENTS

Between 1966 and 1981, date of my official Professor position at the UCBLyon1, I have co-operated with Dr. Françoise GAUME, Director of the Laboratory, to train 10 PhD students.

I have officially supervised 30 PhD students after 1981 as indicated within this section.

1. Frédéric DURVILLE

UCBLyon1, thesis on June 22, 1984

X-ray diffusion and optical spectroscopy applied to the nucleation in a Cr³⁺-doped silicate glass

Co-supervisors: G.Boulon and E. Duval

Co-operation with B. Champagnon

2. Mehdi BOUDERBALA

UCBLyon1, thesis on May 28, 1985

Structural characterization of glasses and glass-ceramics by using laser spectroscopy on Eu³⁺ and Cr³⁺ fluorescent ions

Supervisor: G.Boulon

Co-operation: R.Reisfeld (the Hebrew university of Jerusalem)

3. François ROGEMONT

UCBLyon1, thesis on April 21, 1986

Fluorescence properties of Bi₄Ge₃O₁₂ (BGO) single crystals under laser pumping; excited state dynamic and saturation effect; Electronic structure of the fluorescent ions.

Co-supervisors: C. Pedrini and G. Boulon

4. Vincent PONCON

UCBLyon1, thesis on October 14, 1987

Laser spectroscopy applied to microstructural analysis, nucleation and growth of micro-crystals within Eu³⁺ and Cr³⁺ local probes-doped glassy hosts

Supervisor: G. Boulon

Co-operation: Saint-Gobain Company, J.L. Adam and J. Lucas (University of Rennes) for fluoride glasses and R.Reisfeld (the Hebrew University of Jerusalem) for glass-ceramics

5. Jacques RUBIN

UCBLyon1, thesis on November 12, 1987

Energy transfer dynamic and fluorescence processes in Er³⁺, Tm³⁺, Ho³⁺-doped LiYF₄ infrared solid-state laser crystal.

Co-supervisors: C. Pedrini

Co-operation : G.Boulon

6. Wenjiang NIE

UCBLyon1, thesis on November 23, 1989

*Application of TEM microscopy and fluorescence laser spectroscopy techniques in Xerogel-Glass-glass-ceramic phase transitions of the Cr₂O₃-doped SiO₂-Al₂O₃-ZnO system.
Nucleation processes of Cr-doped ZnAl₂O₄ spinel nanocrystals*

Supervisor: G. Boulon

Co-operation : C. Esnouf (TEM Microscopy Center of INSA of Lyon) and C. May (GEMPPM at INSA of Lyon)

7. Klalif BELLAFFROUGH

UCBLyon1, thesis on June 19, 1990

Electronic structure of transition metal ions by application of the orbital molecular model

Supervisor: F. Michel-Calendini

Co-operation : G.Boulon

8. Alain BRENIER

UCBLyon1, thesis on December 17, 1991

Crystal growth, structural characterization and fluorescence properties of Cr³⁺, Tm³⁺, Ho³⁺ ou Mn⁴⁺ -doped Gd₃Ga₅O₁₂ (GGG) garnet laser single crystals

Supervisor: G. Boulon

Co-operation : C. Pedrini, C. Madej at LPCML and Crismatec Company (Rhône Poulenc) in Grenoble

9. Isabel VERGARA-OGANDO

UAMadrid, thesis on July 1991

Spectroscopy of Ti³⁺-doped YAG and Cr³⁺/Nd³⁺ co-doped GGG in laser crystals

Supervisor: J. Garcia-Sole (UAMadrid) and G.Boulon

Co-operation : A. Monteil (Lyon)

10. Alphonso LORENZO

UAMadrid, thesis on November 8, 1996

Location of rare earth active ions in LiNbO₃ by using Laser spectroscopy and Rutherford Back Scattering (RBS) techniques

Co-supervisors: J.Garcia-Sole (UAMadrid) and G.Boulon

Co-operation: H.Jafrezic (IPN Lyon for Rutherford Back Scattering experiments)

11. Gisèle FOULON

UCBLyon1, thesis on December 17, 1996

Laser Heated Pedestal growth (LHPG) crystal growth technique and spectroscopic characterizations of niobate crystalline fibers (LiNbO₃, BNN, SBN)

Co-supervisors: G.Boulon and M.T.Cohen-Adad

Co-operation: A.Brenier, M.Ferriol

12. Rozen BURLLOT

UCBLyon1, Thesis on December 17, 1997

LHPG and Czochralski crystal growth techniques, spectroscopic characterizations of undoped and Nd,Er-doped LiNbO₃ and LiTaO₃ nonlinear crystals

Co-supervisors: R.Moncorgé and G.Boulon

Co-operation: Y.Guyot

13. Anne-Françoise OBATON

La Rochelle, thesis on November 20, 1998

Synthesis, thermal and optical properties of new Yb-Er-codoped phosphate glasses for the eye-safe solid-state laser. Selection of LaLiP4O12 matrix.

Co-supervisors: B.Elouadi (La Rochelle) and G.Boulon

Co-operation: G. Le Flem and C. Parent (University of Bordeaux)

14. Daniel JAQUE

UAMadrid, thesis on November 17, 1999

Spectroscopic and laser properties of stoichiometric Neodymium-Yttrium- aluminium borate self-frequency nonlinear crystals. Emissions in blue, green and red spectral ranges.

Co-supervisors: J.Garcia-Sole (UAM) and G.Boulon

Co-operation: A.Brenier, A. Kaminskii (Invited Professor, Moscow)

15. F. BOURGEOIS

UCBLyon1, thesis on February 29, 2000

Research of Raman shifter crystals for the eye safe solid state laser at 1540 nm belonging to undoped and Nd³⁺ -doped tungstate family.

Supervisor: G.Boulon

Co-operation: A.Brenier, A.Kaminskii (Invited Professor, Moscow)

16. Frédérique LHOMME

Metz, thesis on July 3, 2000

Optical spectroscopy of Cr³⁺-doped LiNbO3: Cr concentration and crystal composition dependences

Co-supervisors: P.Bourson (Metz) and G.Boulon

Co-operation: Y.Guyot and M. Fontana (Metz)

17. Emmanuel GALLUCCI

UCBLyon1, thesis on November 8, 2000

Tungstates pour la conversion de fréquences laser par décalage Raman. Relation propriétés structurales / propriétés vibratoires, croissance cristalline et caractérisations

Co-supervisors: M.Th. Cohen-Adad and C. Goutaudier

Co-operation: G. Boulon

18. Riadh El OUENZERFI,

UCBLyon1, co-tutelle thesis on February 20, 2002

Fixation and diffusion properties of lanthanides and transuraniens in britholithes, phospho-silicate stockage matrixes

Supervisors: C. Goutaudier, G. Panczer and M. Trabelsi-Ayedi (University of Bizerte)

Co-operation: G. Boulon and M.T.Cohen-Adad

19. Laetitia LAVERSENNE,

UCBLyon1, thesis on February 25, 2002

New chemical combinatory method for the optimization of the spectroscopic properties of Yb³⁺, Er³⁺, Ho³⁺ laser rare earth ions in M₂O₃ (M= Y, Sc, Lu, Gd) refractory singlecrystalline fibers grown by the LHPG technique

Co-supervisors: G.Boulon and M.T.Cohen-Adad

Co-operation :Y.Guyot

20. Nadège OLLIER

UCBLyon1, September 16, 2002

Europium as a luminescent probe of an aluminoborosilicate SON68 nuclear glass and its weathering gels

Supervisors : G. Panczer and B.Champagnon

Co-operation : G.Boulon

**21. Abdes ELHASSOUNI,
UCBLyon1, thesis on June 18, 2004**

Crystal growth, structural characterizations and spectroscopic analysis of singlecrystalline fibres of nonlinear niobate family: LiNbO_3 (LN), $\text{Ba}_2\text{NaNb}_5\text{O}_{15}$ (BNN) and $\text{Sr}_x\text{Ba}_{1-x}\text{Nb}_2\text{O}_6$ (SBN)

Supervisors : C. Goutaudier and G. Boulon

Co-operation : Y. Guyot, K. Lebbou; A. Yoshikawa et T. Fukuda (Japon)

**22. Masahiko ITO,
UCBLyon1, thesis on June 30, 2004**

Yb^{3+} -Doped Fluoride Single Crystals (CaF_2 , KY_3F_{10} , LiYF_4) Grown by "Laser Heated Pedestal Growth (LHPG)" Technique. Spectroscopic Characterization, Concentration Quenching Analysis and Laser Application.

Supervisors: G.Boulon and C.Goutaudier

Co-operation : Y.Guyot and K.Lebbou ; H.Sato and T.Fukuda (Sendai, Japan)

**23. Amina BENSALAH,
UCBLyon1, thesis on June 30, 2004**

Undoped and rare earth ions-doped fluoride optical crystals. Growth by the Czochralski technique, spectroscopic properties and laser tests

Supervisor: G.Boulon

Co-operation : Y.Guyot ; H.Sato et T.Fukuda (Sendai, Japan)

**24. Elena CAÑIBANO CRESPO,
UCBLyon1, thesis on July 2, 2004**

Spectroscopic properties of Yb^{3+} ions in $\text{K}_5\text{Bi}(\text{MO}_4)_4$ molybdate, $\text{Y}_3\text{Al}_5\text{O}_{12}$, $\text{Gd}_3\text{Ga}_5\text{O}_{12}$, $\text{Lu}_3\text{Al}_5\text{O}_{12}$ garnets and YAlO_3 perovskite. Concentration quenching mechanisms and laser evaluation

Supervisor: G.Boulon.

Co-operation : Y.Guyot ; J.Fernandez and R.Balda (Bilbao, Spain) ; A.Yoshikawa and T.Fukuda (Sendai, Japan)

**25. Chieko FUJIWARA
Tohoku University, Sendai (Japan), thesis on 2005**

Crystal growth, crystal structure and optical properties of Yb-doped oxyapatite single crystals

Supervisors : T. Fukuda (Sendai, Japan) and G. Boulon

Co-operation: A. Yoshikawa

**26. Jaouher AMAMI
UCBLyon1, thesis on June 19, 2006**

Synthesis and spectroscopic characterizations of (Yb^{3+} , Eu^{3+}) luminescent structural probes in nanocrystals and bulky single crystals of BaTiO_3 multiphased perovskite and $\text{Y}_3\text{Al}_5\text{O}_{12}$ monophase garnet

Supervisors: G. Boulon and C. Goutaudier

Co-operations : Y. Guyot ; W.Strek and D.Hreniak (Wroclaw, Poland)

27. Sana HRAIECH

UCBLYon1, thesis on May 21, 2007

Yb³⁺-doped laser cubic single crystals of Ln₂O₃ (Ln = Y, Lu et Sc) sesquioxides and CaF₂ fluorides : growth, structural and spectroscopic characterizations

Supervisors: G.Boulon and C.Goutaudier

Co-operations : Y.Guyot ;A.Jouini, A.Yoshikawa (Sendai, Japan); M. Trabelsi-Ayedi (Tunis)

28. Mohamed MEHNAOUI

UCBLYon1, thesis on January 21, 2008

Structural and luminescent properties of new Pb²⁺-doped vanadate/phosphate apatites Ca_{10-x}Pb_x(XO₄)₆Y₂ (X=P, V) (Y= OH, Cl,I) (0 ≤ x ≤10).

Analysis of the Pb²⁺ impurity by time resolved laser spectroscopy

Supervisors: G.Panczer and M.Trabelsi-Ayadi (Tunis)

Co-operation: G. Boulon

29. Wei ZHAO

Hefei (University of Science and Technology of China (USTC of China), co-tutelle thesis on June 15, 2010

Structural and spectroscopic characterizations of Yb³⁺ and Ce³⁺-doped ceramics for lasers and scintillators. Segregation phenomenon between grains and grain boundaries.

Supervisors: G.Boulon and Prof.Min Hin at the USTC of Hefei (China)

Co-operations : A.Brenier, D.Amans ; T.Epicier, TEM Center, INSA de Lyon, Fan (Shanghai, China) ; A.Yoshikawa (Sendai, Japan) and T. Yagi (Konoshima Company)

30. Sergiu ANGHEL

Chisinau (Moldavia), co-tutelle thesis on November 11, 2011

Growth and spectroscopic characterization of transition metal ions (Cr, Ti, Co, V)-doped α-ZnAl₂S₄ spinel-type single crystals

Supervisors: G.Boulon and L.Culiuc in Chisinau (Moldavia)