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EDUCATION AND QUALIFICATIONS

2001: PhD in « Solid State Chemistry » at the French laboratory of Oxides and Fluorides in Le Mans. « *Synthesis and characterisation of vanadium and molybdenum oxides with Metal/Insulator transition* ».

1997: Master degree in « Advanced Solid State Chemistry » with distinction at the “Institut des Matériaux Jean Rouxel” in Nantes, France.

1992-1996: Academic qualifications BSc in Physics and Chemistry (Sciences University of Nantes, France).

1991: High School diploma in Mathematics, Physics and Chemistry in La Roche sur Yon, France.

WORK EXPERIENCE

Since Sept. 2006: Associate Professor at the CIRIMAT/LCMIE laboratory, Paul Sabatier University, Toulouse, France. Synthesis and structural characterisations of oxide and halide (nano)materials, in relation with physical properties, for various energy source applications (Solar cells, Electronics...).

Oct. 2005 – Aug. 2006: Research Scientist for CNRS, CRISMAT laboratory, Caen, France. « *Acid phosphates of transition metals: synthesis and characterisation of new low temperature proton conductors* ». Research role involved the preparation and characterisation of new phosphate materials, followed by electrochemical studies and ionic conduction measurements.

Sept. 2003 – Sept. 2005: Research Scientist at the South Australian Museum, Adelaide, South Australia. « *Fe/Ni ordering in sulfide minerals* ». Research work was essentially based on the study of formation, cationic ordering and phase transitions of minerals and synthetic materials of iron/nickel sulfides.

Jan. 2002 – Sept. 2003: Post-doctoral position at the University of Liverpool, UK. « *Cation site and charge ordering in complex perovskite superstructures produced by a simple modular synthetic approach* ». Research experience in the preparation of complex oxides by design, whose new structural and physical properties were investigated by various techniques.

1998-2001: Research experience in the synthesis and structural, electrical and magnetic property studies of vanadium and molybdenum oxides with the Mott transition-type.

1999-2001: Tutor in “Mineral Chemistry” (graduate level) during my PhD.

Aug. 1997 – May 1998: Military duties as a scientist at the aerial site of Mont de Marsan, France. Samples management and analysis of aeronautic gas by FT-IR spectroscopy.

Sept. 1996 - June 1997: Research experience at the Institut des matériaux in Nantes, France.

- Synthesis and characterisation of mesostructured crystals in silicate/water/surfactant systems.
- Magnetite formation in chitin's teeth.

• **Publications (2002-2020), including 5 Proceedings:**

- 86- “Reevaluation of metal interconnectivity in a partially molten silicate matrix using 3D microtomography”,
A. Néri, J. Guignard, M. Monnereau, M. Bystricky, J-P. Perrillat, D. Andrault, A. King, N. Guignot, **C. Tenailléau**, B. Duployer, M. Toplis, G. Quitté, *Phys. Earth & Planetary Interiors* 308, 106571 (2020).
- 85- “Spheroidal graphite coalescence during thermal cycling in the ferritic domain of a high-silicon cast iron studied by optical microscopy and X-ray computed tomography”,
M. Alves Pegoraro, **C. Tenailléau**, A. Ebel, B. Malard, J. Lacaze, *Mater. Today Comm.*, 25, 101422 (2020).
- 84- “New coordination complexes-based gas-generating energetic composites”,
T. Wu, F. Sevely, B. Julien, F. Sodre, J. Cure, **C. Tenailléau**, A. Esteve, C. Rossi, *Combustion and Flame*, 219, 478–487 (2020).
- 83- “Preparation and study of CuBi_2O_4 thin films by RF magnetron sputtering”,
B. Duployer, **C. Tenailléau**, Y. Thimont, P. Lenormand, A. Barnabé, L. Presmanes, *Mater. Res. Bull.*, 130, 110940 (2020).
- 82- “Synthesis and characterization of $\text{Cs}_2\text{Pb}_{1-x}\text{Bi}_x\text{Cl}_2\text{I}_2$ ($0 < x < 0.15$) derivative perovskite”, E. Breniaux, E. J. Marin-Bernardez, E. Gallet, P. Dufour, **C. Tenailléau**, *Mat. Chem. Phys.*, 247, 122870 (2020).
- 81- “Coarsening and dendritic instability of spheroidal graphite in high silicon cast iron under thermal cycling in the ferritic domain”,
A. Ebel, M. Alves Pegoraro, B. Malard, **C. Tenailléau**, J. Lacaze, *Scripta Materialia*, 178, 86–89 (2020).
- 80- “Alginate-chitosan PEC scaffolds: A useful tool for soft tissues cell therapy”,
R. Bushkalova, M. Farno, **C. Tenailléau**, B. Duployer, D. Cussac, A. Parini, B. Sallerin, S. Girod Fullana, *International Journal of Pharmaceutics*, 571, 118692 1-13 (2019).
- 79- “The inner craniodental anatomy of the *Papio* specimen U.W. 88-886 from the Early Pleistocene site of Malapa, Gauteng, South Africa”,
F. Bouchet, A. Ribéron, J.L. Heaton, J. Hoffman, L. Bam, K. Jakata, M. Tawane, **C. Tenailléau**, B. Zipfel, A. Beaudet, *Palaeont. Afric.* 53, 192-206 (2019).
- 78- “A geometric morphometric approach to the study of variation of shovel-shaped incisors”,
D. Carayon, K. Adhikari, P. Monsarrat, J. Dumoncel, J. Braga, B. Duployer, M. Delgado, M. Fuentes-Guajardo, F. de Beer, J.W. Hoffman, A.C. Oettlé, R. Donat, L. Pan, A. Ruiz-Linares, **C. Tenailléau**, F. Vaysse, R. Esclassan, C. Zanolli, *Am. J. Phys. Anthropol.*, 168, 229-241 (2019).
- 77- “Associated tympanic bullar and cochlear hypertrophy define adaptations to true deserts in African gerbils and laminate-toothed rats (Muridae: Gerbillinae and Murinae)”,
A. Nengovhela, J. Braga, C.D. Frikkie Beer, **C. Tenailléau**, P.J. Taylor, *J. Anatomy*, 234, 179-192 (2019).
- 76- “Cell refinement of CsPbBr_3 perovskite nanoparticles and thin films”,
C. Tenailléau, S. Aharon, B. E. Cohen, L. Etgar, *Nanoscale Adv.*, 1, 147-153 (2019).

- 75- “Reliability of X7R multilayer ceramic capacitors during High Accelerated Life Testing (HALT)”,
A.M. Hernández-López, J.A. Aguilar-Garib, S. Guillemet-Fritsch, R. Nava-Quintero, P. Dufour, **C. Tenailléau**, B. Durand, Z. Valdez-Nava, *Materials (Smart Materials)*, 11(10), 1900 (2018).
- 74- “Enhancing stability and photostability of CsPbI₃ by reducing its dimensionality”,
A. Shpatz Dayan, B.-E. Cohen, S. Aharon, **C. Tenailléau**, M. Wierzbowska, L. Etgar, *Chem. Mater.*, 30(21), 8017-8024 (2018).
- 73- “Microstructure and electrical properties of (Ba_{0.6}Sr_{0.4})_{0.85}Bi_{0.1}TiO₃ ceramics prepared by single-step, liquid-phase, solid-state reactive sintering”,
N. Maso, C. Marcelot, L. Fabre, J.B. Fruhauf, P. Dufour, **C. Tenailléau**, B. Warot-Fonrose, E. Snoeck, S. Guillemet-Fritsch, *J. Electroceramics*, 40(3), 197-202 (2018).
- 72- “Influence of Y₂O₃ on the structure of Y₂O₃-doped BaTiO₃ powder and ceramics”,
A.M. Hernández-López, S. Guillemet-Fritsch, Z. Valdez-Nava, J.A. Aguilar-Garib, **C. Tenailléau**, P. Dufour, J.-J. Demai, B. Durand, *Int. J. Eng. Res. Sci.*, 4(2) 7-11 (2018).
- 71- “Performance enhancement via incorporation of ZnO nanolayers in energetic Al/CuO multilayers”,
L. Marin, Y. Gao, M. Vallet, I. Abdallah, B. Warot-Fonrose, **C. Tenailléau**, A.T. Lucero, J. Kim, A. Esteve, Y.J. Chabal, C. Rossi, *Langmuir*, 33(41), 11086-11093 (2017).
- 70- “Heterojunction p-Cu₂O/ZnO-n solar cell fabricated by Spark Plasma Sintering”,
C. Tenailléau, G. Salek, T.L. Le, B. Duployer, J.J. Demai, P. Dufour, S. Guillemet-Fritsch, *Mater. Renew. Sustain. Energy*, 6(4), 1-7 (2017).
- 69- “Functionalized superhydrophobic coatings with micro-/nanostructured ZnO particles in a sol-gel matrix”,
Q. Boyer, S. Duluard, **C. Tenailléau**, F. Ansart, V. Turq, J.P. Bonino, *J. Mater. Sci.*, 52(21), 12677-12688 (2017).
- 68- “Freeze-casting for PLGA/carbonated apatite composite scaffolds: Structure and properties”,
M. Schardosim, J. Soulié, D. Poquillon, S. Cazalbou, B. Duployer, **C. Tenailléau**, C. Rey, R. Hübler, C. Combes, *Mater. Sci. Engineer. C*, 77, 731-738 (2017).
- 67- “Intra-individual metameric variation expressed at the enameldentine junction of lower post-canine dentition of South African fossil hominins and modern humans”,
L. Pan, J. F. Thackeray, J. Dumoncel, C. Zanolli, A. Oetlé, F. de Beer, J. Hoffman, B. Duployer, **C. Tenailléau**, José Braga, *Am J Phys Anthropol.*, 163(4), 806-815 (2017).
- 66- “Elaboration and Evaluation of Alginate Foam Scaffolds for Soft Tissue Engineering”,
C. Ceccaldi, R. Bushkalova, D. Cussac, B. Duployer, **C. Tenailléau**, P. Bourin, A. Parini Angelo, B. Sallerin, S. Girod Fullana, *Int. J. Pharmaceuticals*, 524, 433-442 (2017).
- 65- “Echoes from the past: New insights into the early hominin cochlea from a phylo-morphometric approach”,
J. Braga, P. Bouvier, J.R. Dherbey, P. Balaesque, L. Risser, J-M. Loubes, J. Dumoncel, B. Duployer, **C. Tenailléau**, *C.R. Palevol*, 16, 508-520 (2017).
- 64- “Morphoarchitectural variation in South African fossil cercopithecoid endocasts”,
A. Beaudet, J. Dumoncel, F. de Beer, B. Duployer, S. Durrleman, E. Gilissen, J. Hoffman, **C. Tenailléau**, J. F. Thackeray, J. Braga, *J. Human Evolution*, 101, 65-78 (2016).

- 63- “First-principles electronic structure calculations for the whole spinel oxide solid solution range $Mn_xCo_{3-x}O_4$ ($0 < x < 3$) and their comparison with experimental data”,
R. Arras, T.L. Le, S. Guillemet-Fritsch, P. Dufour, **C. Tenaillieu**, *Phys. Chem. Chem. Phys.*, **18** 26166-26176 (2016).
- 62- “Internal barrier layer capacitor, nearest neighbor hopping, and variable range hopping conduction in $Ba_{1-x}Sr_xTiO_{3-\delta}$ nanoceramics”,
S Sulekar, JH Kim, H Han, P Dufour, **C Tenaillieu**, JC Nino, E Cordoncillo, H. Beltran-Mir, S. Dupuis, S. Guillemet-Fritsch *J. Mater. Sci.*, **51**(16), 7440-7450 (2016)
- 61- “Understanding the Fragmentation Pattern of Marine Plastic Debris”,
A. Ter Halle, L. Ladirat, X. Gendre, D. Goudouneche, C. Pusineri, C. Routaboul, **C. Tenaillieu**, B. Duployer, E. Perez, *Env. Sci. Techno.*, **50**, 5668–5675 (2016).
- 60- “Microstructural and optical properties of spinel oxide $M_xCo_{2-x}MnO_4$ ($M = Ni, Zn$ or Cu ; $0 < x < 1$) thin films prepared by inorganic polycondensation and dip-coating methods”,
T.L. Le, S. Guillemet-Fritsch, P. Dufour, **C. Tenaillieu**, *Thin Solid Films*, **612**, 14-21 (2016).
- 59- “Further morphological evidence on South African earliest Homo lower postcanine dentition: Enamel thickness and enamel dentine junction”,
L. Pan, J. Dumoncel, F. de Beer, J. Hoffman, J. F. Thackeray, B. Duployer, **C. Tenaillieu**, J. Braga, *J. Human Evolution*, **96**, 82-96 (2016).
- 58- “Upper third molar internal structural organization and semicircular canal morphology in Plio-Pleistocene South African cercopithecoids”,
A. Beaudet, J. Dumoncel, J. F. Thackeray, L. Bruxelles, B. Duployer, **C. Tenaillieu**, L. Bam, J. Hoffman, F. de Beer, J. Braga, *J. Human Evolution*, **95**, 104-120 (2016).
- 57- “Elaboration and characterization of barium titanate powders obtained by the mechanical activation of barium nitrate and titanate oxide, and electrical properties of the ceramics sintered by SPS”,
T. Al-Naboulsi, M. Boulos, **C. Tenaillieu**, P. Dufour, M. Zakhour, S. Guillemet-Fritsch, *J. Ceram. Process. Res.*, **17**(8), 870-875 (2016).
- 56- “Colossal permittivity and low losses in $Ba_{1-x}Sr_xTiO_{3-d}$ reduced nanoceramics”,
S. Dupuis, S. Sulekar, J.H. Kim, H. Han, P. Dufour, **C. Tenaillieu**, J.C. Nino, S. Guillemet-Fritsch, *J. Europ. Ceram. Soc.*, **36**, 567-575 (2016).
- 55- “Colossal and frequency stable permittivity of barium titanate nanoceramics derived from mechanical activation and SPS sintering”,
T. Al-Naboulsi, M. Boulos, **C. Tenaillieu**, P. Dufour, M. Zakhour, S. Guillemet-Fritsch, *International Journal of Engineering Research and Science* **1**(7), 25-33 (2015).
- 54- “Enhancing the reactivity of Al/CuO nanolaminates by Cu incorporation at the interfaces”,
L. Marin, C.E. Nanayakkara, J.-F. Veyan, B. Warot-Fonrose, S. Joulie, A. Esteve, **C. Tenaillieu**, Y.J. Chabal, C. Rossi, *Appl. Mat. Interfaces*, **7**, 11713-11718 (2015).
- 53- “Room temperature inorganic polycondensation of oxide (Cu_2O and ZnO) nanoparticles and thin films preparation by the dip-coating technique”,
G. Salek, **C. Tenaillieu**, P. Dufour, S. Guillemet-Fritsch, *Thin Solid Films*, **589** 872-876 (2015).
- 52- “Sustainable low temperature preparation of $Mn_{3-x}Co_xO_4$ ($0 < x < 3$) spinel oxide colloidal dispersions used for solar absorber thin films”,

G. Salek, P. Dufour, S. Guillemet-Fritsch, **C. Tenaillon**, *Mat. Chem. Phys.*, **162**, 252-262 (2015).

51- “Characterization and functionalization by sol–gel route of SiC foams”,
J. Mollicone, F. Ansart, P. Lenormand, B. Duployer, **C. Tenaillon**, J. Vicente, *J. Eur. Ceram. Soc.*, **34**, 3479-3487 (2014).

50- “Magnetron Sputtered Al-CuO Nanolaminates: Effect of Stoichiometry and Layers Thickness on Energy Release and Burning Rate”,
M. Bahrami, G. Taton, V. Conédéra, L. Salvagnac, **C. Tenaillon**, P. Alphonse, C. Rossi, *Propellants, Explosives, Pyrotechnics*, **39**, 365-373 (2014).

49- “Real-time crystallization in fluorinated parylene probed by conductivity spectra”,
R. Khazaka, M. L. Locatelli, S. Diahm, **C. Tenaillon**, R. Kumar, *Appl. Phys. Letters*, **104**, 112902 (2014).

48- “Complex diffusion behavior of oxygen in nanocrystalline BaTiO₃ ceramics”,
R.A. De Souza, C. Voisin, H. Schraknepper, M. Teusner, M. Kessel, P. Dufour, **C. Tenaillon**, S. Guillemet-Fritsch, *Phys. Chem. Chem. Phys.*, **16**, 2568-2575 (2014).

47- “Dielectric strength of parylene HT”,
S. Diahm, M. Bechara, M.L. Locatelli, R. Khazaka, **C. Tenaillon**, R. Kumar, *J Appl. Physics*, **5**, 054102 (2014).

46- “Low-temperature carbon monoxide and propane total oxidation by nanocrystalline cobalt oxides”,
G. Salek, P. Alphonse, P. Dufour, S. Guillemet-Fritsch, and **C. Tenaillon**, *Appl. Catalysis B: Environmental.*, **147**, 1-7 (2014).

45- “Microstructure of single-phase cobalt and manganese oxide spinel Mn_{3-x}Co_xO₄ ceramics”,
N. El Horr, S. Guillemet-Fritsch, A. Rousset, H. Bordeneuve and **C. Tenaillon**, *J. Eur. Ceram. Soc.*, **34**, 317-326 (2014).

44- “Influence of oxygen substoichiometry on the dielectric properties of BaTiO_{3-δ} nanoceramics obtained by SPS”,
C. Voisin, S. Guillemet-Fritsch, P. Dufour, **C. Tenaillon**, H. Han and J.C. Nino, *Int. J. Appl. Ceram. Technol.*, **10**, E122-133 (2013).

43- “Origin of colossal permittivity in BaTiO₃ via broadband dielectric spectroscopy”,
H. Han, C. Voisin, S. Guillemet-Fritsch, P. Dufour, **C. Tenaillon**, C. Turner and J.C. Nino, *J. Appl. Physics*, **113**(2), 024102-1/8 (2013).

42- “Electrical Properties of Mn_{3-x}Co_xO₄ (0 ≤ x ≤ 3) Ceramics: An Interesting System for Negative Temperature Coefficient Thermistors”,
A. Rousset, **C. Tenaillon**, P. Dufour, H. Bordeneuve, I. Pasquet, S. Guillemet-Fritsch, V. Poulain and S. Schuurman, *Int. J. Appl. Ceram. Technol.*, **10**(1), 175–185 (2013).

41- “Interfacial chemistry in Al/CuO reactive nanomaterial and its role in exothermic reaction”,
C. Rossi, J. Kwon, J.M. Ducere, P. Alphonse, M. Bahrami, M. Petrantoni, J.F. Veyan, **C. Tenaillon**, A. Esteve and Y.J. Chabal, *Appl. Mater. Interfaces*, **5**, 605-613 (2013).

40- “Differential thermal analysis assessment of beta phase precipitation in Al-6.5Si-1Fe alloy”,
D. Ferdian, B. Suharno, B. Duployer, **C. Tenaillon**, L. Salvo and J. Lacaze, *Trans. Indian Inst. Metals*, **65**, 821 (2012).

- 39- “A simple preparation process of pure $Mn_{3-x}Co_xO_4$ ($x = 1, 1.5$ and 2) desert rose-like nanoparticles and their optical properties”,
G. Salek, S. Guillemet-Fritsch, P. Dufour and **C. Tenailléau**, *Int. J. Chem.*, **4(6)**, 44-53 (2012).
- 38- “Recent progress in the shaping and sintering of barium titanate nanoparticles. Application to high permittivity capacitors”,
S. Guillemet-Fritsch, C. Voisin, R. N. Quintero, P. Dufour, **C. Tenailléau**, J.A. Aguilar Garib, M.E. Reyes Melo and B. Durand, Proceeding IMAPS/Acers 8th International CICMT Conference and Exhibition 2012/ April 16-19, Erfurt, Germany. TP53, 222-227 (2012).
- 37- “Microstructure of $Ba_{1-x}La_xTiO_{3-d}$ ceramics sintered by spark plasma sintering”,
N. El Horr, Z. Valdez-Nava, **C. Tenailléau** and S. Guillemet-Fritsch, *J. Eur. Ceram. Soc.*, **31**, 1087-1096 (2011).
- 36- “Electrical Conductivity of Parylene F at High Temperature”,
S. Diahham, M. Bechara, M.L. Locatelli and **C. Tenailléau**, *J. Electronic Mat.*, **40**, 295-300 (2011).
- 35- “Structural characterization of dense reduced $BaTiO_3$ and $Ba_{0.95}La_{0.05}TiO_3$ nanoceramics showing colossal dielectric values”,
Z. Valdez-Nava, **C. Tenailléau**, S. Guillemet-Fritsch, N. El Horr, T. Lebey, P. Dufour, B. Durand and J-Y. Chane-Ching, *J. Phys. Chem. Solids*, **72**, 17-23 (2011).
- 34- “Multilayered Al/CuO thermite formation by reactive magnetron sputtering: nano versus micro”,
M. Petrantoni, C. Rossi, L. Salvagnac, V. Conédéra, A. Estève, **C. Tenailléau**, P. Alphonse and Y. J. Chabal, *J. Appl. Phys.*, **108**, 084323/1-5 (2010).
- 33- “Nanoenergetics on a chip: technology and application for micro ignition in safe arm and fire systems”,
M. Petrantoni, M. Bahrami, L. Salvagnac, V. Conédéra, C. Rossi, P. Alphonse, C. Tenailléau, Proceedings Power MEMS Leuven, 39-42 (2010).
- 32- “Magnetic properties of cobalt and manganese oxide spinel ceramics”,
S. Guillemet-Fritsch, **C. Tenailléau**, H. Bordeneuve and A. Rousset, *Adv. Sci. Tech. : 12th International ceramics congress Part. F*, **67**, 143-148 (2010).
- 31- “Realization of aligned three-dimensional single-crystal chromium nanostructures by thermal evaporation”,
K. Zhang, **C. Tenailléau**, P. Alphonse and J-Y. Chane-Ching, *Appl. Phys. A*, **100**, 1049-1055 (2010).
- 30- “A thermosyphon driven hydrothermal flow-through cell for *in situ* and time-resolved neutron studies”,
F. Xia, B. O’Neill, Y. Ngothai, J. Peak, **C. Tenailléau**, B. Etschmann, G. Qian, J. Brugger, A. Studer, S. Olsen and A. Pring, *J. Appl. Cryst.*, **43**, 1-9 (2010).
- 29- “Cation distribution in manganese cobaltite spinels $Co_{3-x}Mn_xO_4$ ($0 \leq x \leq 1$) determined by thermal analysis”,
H. Bordeneuve, A. Rousset, **C. Tenailléau** and S. Guillemet-Fritsch, *J. Therm. Anal. Calorim.*, **101**, 137 (2010).

- 28- “Structural variations and cation distributions in $Mn_{3-x}Co_xO_4$ ($0 \leq x \leq 3$) dense ceramics using neutron diffraction”,
H. Bordeneuve, **C. Tenaillieu**, S. Guillemet-Fritsch, R. Smith, E. Suard and A. Rousset, *Solid State Sci.* **12**, 379 (2010).
- 27- “Synthesis process of nanowired Al/CuO thermite”,
M. Petrantoni, C. Rossi, V. Conédéra, D. Bourrier, P. Alphonse and **C. Tenaillieu**, *J. Phys. Chem. Solids*, **71**, 80 (2010).
- 26- “Colossal dielectric permittivity of BaTiO₃-based nanocrystalline ceramics sintered by spark plasma sintering”,
Z. Valdez-Nava, S. Guillemet-Fritsch, **Ch. Tenaillieu**, T. Lebey, B. Durand and J.-Y. Chane-Ching, *J. Electroceram.*, **22**, 238 (2009).
- 25- “A new intersecting tunnel structure in the $A^I M^{III} [PO_3(OH)_2]$ series for $A^I = Ag$, $M^{III} = In$: Analysis of structural relationships”,
A. Guesdon, F. Romero Sarria, **C. Tenaillieu** and B. Raveau, *Solid State Sci.*, **11**, 349 (2009).
- 24- “Integrating Al with NiO nano honeycomb to realize an energetic material on silicon substrate”,
K. Zhang, C. Rossi, P. Alphonse, **C. Tenaillieu**, S. Cayez and J.-Y. Chane-Ching, *Appl. Phys. A-Mater.*, **94**, 957 (2009).
- 23- “CuO nanowires grown from Cu film heated under a N₂/O₂ flow”,
K. Zhang, C. Rossi, **C. Tenaillieu** and V. Conedera, *J. Nanosci. Nanotechnol.*, **9**, 1418 (2009).
- 22- “Nanostructured materials with highly dispersed Au-Ce_{0.5}Zr_{0.5}O₂ nanodomains: A route to temperature stable Au catalysts?”,
J.-Y. Chane-Ching, F. Moncho, D. Truyen, P. Alphonse, **C. Tenaillieu**, J.D. Marty and L. Datas, *J. Mater. Chem.*, **18**, 4712 (2008).
- 21- “Modular construction of oxides structures – Compositional control of transition metal coordination environments”,
C. Tenaillieu, M. Allix, J.B. Claridge, M. Hervieu, M.F. Thomas, J.P. Hirst and M.J. Rosseinsky, *J. Am. Chem. Soc.*, **130**(24), 7570 (2008).
- 20- “The crystal chemistry of Fe-bearing sphalerites: An Infrared spectroscopic study”,
A. Pring, S. Tarantino, **C. Tenaillieu**, B. Etschmann, M. Carpenter, M. Zhang, Y. Liu and R.L. Withers, *Am. Mineral.*, **93**, 591 (2008).
- 19- “NiO nanostructured honeycomb realized by annealing Ni film deposited on silicon”,
K. Zhang, C. Rossi, P. Alphonse and **C. Tenaillieu**, *J. Nanosci. Nanotechnol.*, **8**(11), 5903 (2008).
- 18- “Synthesis of NiO nanowalls by thermal treatment of Ni thin film deposited onto a stainless steel substrate”,
K. Zhang, C. Rossi, P. Alphonse and **C. Tenaillieu**, *Nanotechnology*, **19**(15), 5605 (2008).
- 17- “Aligned three-dimensional prism-like magnesium nanostructures realized onto silicon substrate”,
K. Zhang, C. Rossi, **C. Tenaillieu** and P. Alphonse, *Appl. Phys. Lett.*, **92**(6), 3123 (2008).
- 16- “Colossal permittivity in ultrafine grain size BaTiO_{3-x} and Ba_{0.95}La_{0.05}TiO_{3-x} materials”,
S. Guillemet-Fritsch, Z. Valdez-Nava, **C. Tenaillieu**, T. Lebey, B. Durand and J.-Y. Chane-Ching, *Adv. Mater.*, **20**, 551 (2008).

- 15- “Kinetics and mechanism of hydrothermal alteration from pentlandite to violarite”,
F. Xia, G. Chen, A. Pring, J. Brugger, Y. Ngothai, B. O'Neill, C. Colby, **C. Tenaillieu**, H. Wang, Y. Yang, *Acta Geologica Sinica (Dizhi Xuebao)*, **81**(10), 1378 (2007).
- 14- “Development of a nano-Al/CuO based energetic material on silicon substrate”,
K. Zhang, C. Rossi, GAA. Rodriguez, **C. Tenaillieu** and P. Alphonse, *Appl. Phys. Lett.*, **91**(11), 3117 (2007).
- 13- “Synthesis of large-area and aligned copper oxide nanowires from copper thin film on silicon substrate”,
K. Zhang, C. Rossi, **C. Tenaillieu**, P. Alphonse and J.-Y. Chane-Ching, *Nanotechnology*, **18**(27), 5607 (2007).
- 12- “A neutron powder diffraction study of Fe and Ni distributions in synthetic pentlandite and violarite using ^{60}Ni isotope”,
C. Tenaillieu, B. Etschmann, R. Ibberson and A. Pring, *Am. Mineral.*, **91**, 1442 (2006).
- 11- “A flow-through hydrothermal cell for *in-situ* neutron diffraction studies of phase transformation”,
B.K. O'Neill, **C. Tenaillieu**, Y. Nogthai, A. Studer, J. Brugger and A. Pring, *Physica B*, **385-86**, 942 (2006).
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- 4- “Influence of Mo-doping on the magnetic properties of $(\text{V}_{1-x}\text{Mo}_x)_{2-\delta}\text{O}_3$ ”,
C. Tenaillieu, E. Suard, J. Rodriguez-Carvajal, and P. Lacorre, *J. Magn. Magn. Mater.*, **278**, 57 (2004).

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1- “On a new family of doped vanadium sesquioxides $(V_{1-x}Mo_x)_{2-\delta}O_3$ ”,

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• **Book Chapter**

- “Nano energetic materials: synthesis, characterization, modelling and applications”,

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DIPLÔMES ET FORMATION

2001 : Doctorat de « Chimie de l'Etat Solide » sous la direction du Docteur Philippe Lacorre au Laboratoire des Fluorures du Mans : « Synthèse et caractérisation d'oxydes de vanadium et molybdène à transition Métal/Isolant ».

1997 : Diplôme d'Etudes Approfondies (D.E.A.) de « Chimie Avancée de l'Etat Solide » obtenu avec Mention à l'Institut des Matériaux Jean Rouxel de Nantes.

1992-1996 : Diplômes Universitaires (Faculté des Sciences et Techniques de Nantes).
Deug A, Licence et Maîtrise ès Sciences Physiques

1991 : Baccalauréat série C au Lycée Pierre Mendès France de La Roche sur Yon.

EXPERIENCE PROFESSIONNELLE

Depuis Septembre 2006 : Maître de Conférences au Laboratoire CIRIMAT/LCMIE de Toulouse, Université Paul Sabatier. **Spécialités : Synthèse et caractérisation structurale, en relation avec l'étude des propriétés physiques, de (nano)matériaux à base d'oxydes ou halogénures en vue d'applications dans divers domaines de l'Energie (Electronique et Solaire, essentiellement).**

2005-2006 : Associé de Recherche du CNRS au Laboratoire CRISMAT de Caen dans l'équipe de la Professeur Maryvonne Hervieu : « Phosphates acides d'éléments de transition: synthèse et caractérisation de nouveaux conducteurs protoniques basse température ».

2004-2005 : Associé de Recherche au Département des Sciences du Musée d'Australie du Sud à Adélaïde sous la direction du Professeur Allan Pring : « Fe/Ni ordering in sulfide minerals ».

2002-2003 : Associé de Recherche à l'Université de Liverpool, U.K., sous la direction du Professeur Matthew Rosseinsky : « Cation site and charge ordering in complex perovskite superstructures produced by a simple modular synthetic approach ».

1998-2001 : Travaux de Recherche portant sur la synthèse et les caractérisations structurale, électrique et magnétique de nouveaux oxydes de métaux 3d et 4d à transition Métal/Isolant.

1999-2001 : Enseignements à l'I.U.T. de Chimie du Mans (152 heures équivalent TD).

Aout 1997 - Mai 1998 : Scientifique du Contingent au Laboratoire d'Etudes Médico-Physiologiques de la base aérienne de Mont de Marsan. Analyse de gaz aéronautiques par méthode Infra-Rouge à Transformée de Fourier.

Sep. 1996 - Juin 1997 : Stages de D.E.A. à l'Institut des Matériaux Jean Rouxel de Nantes.

- Synthèse et caractérisation de matériaux mésostructurés dans le système silicate/eau/tensioactif.
- Etude sur la formation de magnétite dans les dents de chiton.

Maître de Conférences (depuis Sept. 2006) – HDR (12-10-2016)

Laboratoire CIRIMAT - Université Paul Sabatier - Toulouse

Responsabilités Pédagogiques :

- 2007/08, 2011/12 : Présidences de jury de Baccalauréat (Lycées : International de Colomiers, De Rodat et Fermat de Toulouse)
- 2008 : Participation aux journées d'informations sur les Sciences et la Recherche auprès des enseignants du secondaire.
- 2008 : Membre de la commission de spécialistes en section 33 INP pour postes de MCF
- 2009 : Membre de la commission de spécialistes en sections 31 et 33 UPS pour postes d'ATER
- 2008, 2010/13 : Tuteur universitaire de stages en entreprise pour Master 2 Pro PPC
- 2010/... : Tuteur universitaire de stages en laboratoire et/ou en entreprise pour Licence Pro Matériaux
- 2010/... : Encadrant de stages au laboratoire CIRIMAT pour Master 1 Matériaux
- **2011/2015 : Responsable de la Spécialité Chimie des Matériaux (S6) de L3 Chimie**
- 2012 & 2014 : Encadrant de stages (6 mois) au laboratoire CIRIMAT pour Master 2 Recherche Matériaux de l'UPS & Renewable Energies de l'USTH
- 2012/... : Responsable de l'UE 11 « Matériaux pour l'Electronique » (S8) en Master 1 Matériaux
- 2012/... : Responsable de l'UE 4 « Chimie et Matériaux » en M1 et de l'UE 3 « Stockage d'Energie » en M2 du Master « Renewable Energies » de l'Université de Sciences et Technologie à Hanoi (USTH)
- **2013/... : Coordinateur Erasmus/Mundus « Chimie des Matériaux » et « Procédés Physico-Chimiques »** de l'Université Paul Sabatier (UPS)
- **2013/... : Membre du collège scientifique de Chimie à l'UPS**
- 2015/17 : Coordinateur du Cursus Master Ingénierie « Sciences et génie des matériaux » de l'UPS

Enseignements en TP, TD et CM (en moyenne ~200h éq.TD/an depuis l'affectation en Septembre 2006) de Chimie Inorganique et Minérale, Chimie du Solide, Sciences des Matériaux aux 3 niveaux de la Licence (Chimie, Physique) et 2 niveaux de Masters (M1 Matériaux et M2 Pro Procédés Physico-Chimiques)

Responsabilités liées à la Recherche Scientifique :

- Encadrant de Thèses et *Post-docs* :
- * Synthèse et caractérisation de pérovskites halogénées et dérivées (2D...) pour le photovoltaïque, E. Breniaux, 2018/...
- * *Field Grading Ceramic substrate for High Voltage applications*, D. Kenfoui, DGA, 2017/19
- * Mise en forme de couches minces d'oxydes pour le photovoltaïque, Ly Le, 2013/17
- * Influence de la phase pyrochlore $Y_2Ti_2O_7$ sur les propriétés électriques de composants électroniques à base de $BaTiO_3$, A.M. Hernandez, 2016/19, en partenariat avec la société KEMET
- * *SCT Semiconducting Tubes*, N. Maso-Carcases, 2015/16
- * *Compréhension des propriétés électroniques de matériaux semi-conducteurs originaux*, H. Han, 2014/15
- * Synthèse et caractérisation d'oxydes métamatériaux, C. Dupas, 2012/15
- * Diffusion de l'oxygène dans $BaTiO_3$ pour l'électronique de puissance, S. Dupuis, 2012/15
- * Multicouches de nanothermites à base de CuO/Al , M. Bahrami 2011/13
- * Préparation de films minces d'oxydes absorbants de lumière, G. Salek, 2011/13 (+ Jury de Thèse)
- * Diélectrique à permittivité colossale à base de $BaTiO_3$, C. Voisin, 2010/13 (+ Jury de Thèse)
- * *Thermistances CTN à base de $Mn_{3-x}Co_xO_4$* , A. Lecointre, 2011/12
- * Nanomatériaux énergétiques à base de CuO/Al , M. Petrantoni, 2008/10 (+ Jury de Thèse)
- * Poudres et céramiques de thermistances CTN à base de $Mn_{3-x}Co_xO_4$, H. Bordeneuve, 2007/09
- **2009/2013 : Responsable de la thématique 'Energie et Matériaux' de la Fédération de recherche FERMaT (FR3089) et depuis 2012 co-responsable de la thématique « Matériaux et Applications »**
- 2009/... : Membre du Service de Prévention et Sécurité (PCR) au CIRIMAT/UPS
- **2010/... : Responsable du Tomographe et Diffractomètre/reflectomètre RX de FERMaT**

- 2011/...: Représentant du CIRIMAT dans le projet 3DPHI concernant l'intégration hybride des systèmes de l'électronique de puissance
- 2011/...: Représentant du CIRIMAT et de l'INPT dans PRIMES (Pôle de Recherche sur l'Intégration de puissance et le Management de l'Energie et de ses composants de Stockage)
- 2011/...: Représentant de l'équipe OVM pour l'utilisation de la plate-forme de frittage flash (SPS) du MHT à Toulouse
- **2013/...: Membre élu du conseil de l'UMR CIRIMAT**
- **2016/2020 : Directeur adjoint de la Fédération de recherche FERMaT**