

Rachel DESFEUX – Publications – June, 2013

- 1 - "Conditions for in-situ growth of BiSrCaCuO thin films by laser deposition", G. Poullain, **R. Desfeux** and H. Murray, *Physica C* 214 (1993) 195-203
- 2 - "Thin film deposition of a new cubic perovskite, $\text{La}_{4+x}\text{Ba}_{1-x}\text{Cu}_5\text{O}_{12+\delta}$ used for the realization of multilayers with YBCO", **R. Desfeux**, J.F. Hamet, B. Mercey, C. Simon, M. Hervieu and B. Raveau, *Physica C* 221 (1994) 205-214 (*First page of HIGH T_c UPDATE - Vol.8, N°2, Jan. 15, 1994*)
- 3 - "Realization of high T_c Dc SQUIDS. Characterization on a broad range of temperature", C. Dolabdjian, D. Robbes, C. Gunther, M. Lam Chok Sing, **R. Desfeux** and D. Bloyet, *J. Phys. III*, 4 (1994) 621-625
- 4 - "Theoretical and experimental aspects of a high T_c vortex flow transistor. Comparison with a high T_c multiloop interferometer", S. Flament, C. Dubuc, M. Lam Chok Sing, C. Gunther, P. Bernstein, J.F. Hamet, B. Blanc-Guilhon and **R. Desfeux**, *J. Phys. III*, 4 (1994) 627-633
- 5 - "A new cubic perovskite $\text{La}_{4+x}\text{Ba}_{1-x}\text{Cu}_5\text{O}_{12+\delta}$ thin film deposited by laser ablation and used in multilayer structures with YBCO", **R. Desfeux**, J.F. Hamet, B. Mercey, Ch. Simon, M. Hervieu and B. Raveau, *Physica C* 235-240 (1994) 703-704
- 6 - "Superconducting fast microbolometers operating below their critical temperature", P. Langlois, D. Robbes, M. Lam Chok Sing, C. Gunther, D. Bloyet, J.F. Hamet, **R. Desfeux** and H. Murray, *Journal of Applied Physics* 76 (6) (1994) 3858-3868
- 7 - "Progress towards a low noise temperature regulation using a superconductive high T_c microbridge", E. Lesquey, C. Gunther, S. Flament, **R. Desfeux**, J.F. Hamet and D. Robbes, *IEEE Transactions on Applied Superconductivity* 5 (2) (1995) 2427-2430
- 8 - "Growth of CaCuO_2 and $\text{Sr}_x\text{Ca}_{1-x}\text{CuO}_2$ epitaxial films on NdGaO_3 substrates by pulsed laser deposition", G. Balestrino, **R. Desfeux**, S. Matellucci, A. Paoletti, G. Petrocelli, A. Tebano, B. Mercey and M. Hervieu, *Journal of Materials Chemistry* 5 (11) (1995) 1879-1883
- 9 - "Pulsed laser deposition of $\text{SrCuO}_2/\text{CaCuO}_2$ superlattices", C. Aruta, G. Balestrino, **R. Desfeux**, S. Martellucci, A. Paoletti and G. Petrocelli, *Applied Physics Letters* 68 (7) (1996) 926-928
- 10 - "Optical conductivity of CuO_2 infinite-layer films", P. Dore, P. Calvani, G. De Marzi, A. Paolone, S. Lupi, G. Balestrino and **R. Desfeux**, *Solid State Communications* 104 (1) (1997) 41-46
- 11 - "Irradiation effects on the surface morphology and on the magnetic microstructure of giant magnetoresistance $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films studied by magnetic force microscopy", **R. Desfeux**, F. Elard, A. Da Costa, C. Mathieu, J. Wolfman, J.F. Hamet and Ch. Simon, *Journal of Magnetism and Magnetic Materials* 196 (1999) 123-125
- 12 - "Lattice mismatch effects between the substrate and GMR $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films studied by scanning probe microscopy and Raman spectroscopy", D. Bormann, **R.**

- Desfeux**, F. Degave, B. Khelifa, J.F. Hamet and J. Wolfman, *Physica Status Solidi (b)* 215 (1999) 691-695
- 13 - "Microstructure and magnetic properties of strained $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films", A. M. Haghiri-Gosnet, J. Wolfman, B. Mercey, Ch. Simon, P. Lecoeur, M. Korzenski, M. Hervieu, **R. Desfeux** and G. Baldinozzi, *Journal of Applied Physics* 88 (2000) 4257-4264
 - 14 - "PLD grown Y_2O_3 thin films from Y-metal: an advantageous alternative to films deposited from yttria", B. Korzenski, P. Lecoeur, B. Mercey, D. Chippaux, B. Raveau and **R. Desfeux**, *Chemistry Materials* 12 (2000) 3139-3150
 - 15 - "Magnetic microstructure of CMR $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films grown on (001) LaAlO_3 substrates studied by X-Ray diffraction and magnetic force microscopy", **R. Desfeux**, S. Bailleul, W. Prellier and A.M. Haghiri-Gosnet, *Materials Science Forum* 373-376 (2001) 589-592
 - 16 - "Substrate-effect on the magnetic microstructure of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films studied by magnetic force microscopy", **R. Desfeux**, S. Bailleul, A. Da Costa, W. Prellier and A.M. Haghiri-Gosnet, *Applied Physics Letters* 78 (2001) 3681-3683
 - 17 - "Thickness dependence on the surface morphology and the magnetic microstructure of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ films under different strains", **R. Desfeux**, A. Da Costa and W. Prellier, *Surface Science* 497 (2002) 81-92
 - 18 - "First synthesis of vanadium oxide thin films by spray pyrolysis technique", A. Bouzidi, N. Benramdane, A. Nakrela, C. Mathieu, B. Khelifa, **R. Desfeux** and A. Da Costa, *Materials Science and Engineering B95* (2002) 141-147
 - 19 - "Effect of substrate temperature on the structural and optical properties of MoO_3 thin films prepared by spray pyrolysis technique", A. Bouzidi, N. Benramdane, H. Tabet-Derraz, C. Mathieu, B. Khelifa and **R. Desfeux**, *Materials Science and Engineering B 97* (2003) 5-8
 - 20 - "Crystallinity, surface morphology and magnetic properties of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ thin films: An approach based on the laser ablation plume range models" M. Koubaa, A.M. Haghiri-Gosnet, **R. Desfeux**, P. Lecoeur, W. Prellier and B. Mercey, *Journal of Applied Physics* 93 (2003) 5227-5235
 - 21 - "Evidence of strain induced structural change in hetero-epitaxial NdNiO_3 thin films with metal-insulator transition", P. Laffez, O.I. Lebedev, P. Ruello, **R. Desfeux**, G. Banerjee and F. Capon, *The European Physical Journal - Applied Physics* 25 (2004) 25-31
 - 22 - "Effect of crystallographic orientation upon switching properties of PZT films measured by electrostatic force microscopy", **R. Desfeux**, A. Da Costa, A. Flambard, C. Legrand, D. Tondelier, G. Poullain and R. Bouregba, *Applied Surface Science* 228 (2004) 34-39
 - 23 - "Domain manipulation of ferroelectric BaTiO_3 thin films: application to the local reorientation of liquid crystal", J.F. Blach, **R. Desfeux**, A. Da Costa, D. Bormann, J.F. Henninot, M. Warenghem and W. Prellier, *Liquid Crystals* 31 (9) (2004) 1241-1250
 - 24 - "Correlation between local hysteresis and crystallite orientation in PZT thin films deposited on Si and MgO substrates", **R. Desfeux**, C. Legrand, A. Da Costa, D. Chateigner, R. Bouregba and G. Poullain, *Surface Science* 600 (1) (2006) 219-228

- 25 - "Optical and electrical properties of Bi_2S_3 films deposited by spray pyrolysis", M. Medles, N. Benramdane, A. Bouzidi, A. Nakrela, H. Tabet-Derraz, Z. Kebbab, C. Mathieu, B. Khelifa and **R. Desfeux**, *Thin Solid Films* 497 (2006) 58-64
- 26 - "Structural and optical properties of MoO_3 and V_2O_5 thin films prepared by Spray Pyrolysis", L. Boudaoud, N. Benramdane, **R. Desfeux**, B. Khelifa and C. Mathieu, *Catalysis Today* 113 (2006) 230-234
- 27 - "Piezoelectric evaluation of ion beam etched $\text{Pb}(\text{Zr,Ti})\text{O}_3$ thin films by piezoresponse force microscopy", C. Legrand, A. Da Costa, **R. Desfeux**, C. Soyer and D. Rémiens, *Applied Surface Science* 253 (2007) 4942-4946
- 28 - "Nanoscale investigations of electrical properties in relaxor $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - PbTiO_3 thin films deposited on Platinum and LaNiO_3 electrodes by means of local piezoelectric response", A. Ferri, A. Da Costa, **R. Desfeux**, M. Detalle, G.S. Wang and D. Rémiens, *Integrated Ferroelectrics* 91 (2007) 80-96
- 29 - "Nanoscale investigations of switching properties and piezoelectric activity in ferroelectric thin films using piezoresponse force microscopy", **R. Desfeux**, A. Ferri, C. Legrand, L. Maès, A. Da Costa, G. Poullain, R. Bouregba, C. Soyer and D. Rémiens, *International Journal of Nanotechnology* 5 (2008) 827-837
- 30 - "Local piezoelectric hysteresis loops for the study of electrical properties of $0.7\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - 0.3PbTiO_3 thin films: bottom electrode dependence and film thickness effect", A. Ferri, A. Da Costa, S. Saitzek, **R. Desfeux**, M. Detalle, G.S. Wang and D. Rémiens, *Ferroelectrics* 362 (2008) 21-29
- 31 - "Pyro, ferro and dielectrics properties of $\text{Ba}_{0.8}\text{Sr}_{0.2}\text{TiO}_3$ films deposited by sol-gel on platinized silicon substrates", M. Mascot, D. Fasquelle, G. Vélou, A. Ferri, **R. Desfeux**, L. Courcot and J.C. Carru, *Ferroelectrics* 362 (2008) 79-86
- 32 - "Comparative analysis for the local piezoelectric properties of ion beam and reactive ion beam etched $\text{Pb}(\text{Zr,Ti})\text{O}_3$ thin films", C. Blach-Legrand, S. Saitzek, A. Da Costa, **R. Desfeux**, C. Soyer and D. Rémiens, *Integrated Ferroelectrics* 98 (2008) 230-240
- 33 - "Thickness dependence of the nanoscale piezoelectric properties measured by piezoresponse force microscopy on (111)-oriented PLZT 10/40/60 thin films", A. Ferri, S. Saitzek, A. Da Costa, **R. Desfeux**, G. Leclerc, R. Bouregba and G. Poullain, *Surface Science* 602 (2008) 1987-1992
- 34 - "Piezoelectric response of PZT nanostructures obtained by focused ion beam", D. Rémiens, R.H. Liang, D. Troadec, D. Deresmes, C. Soyer, A. Da Costa and **R. Desfeux**, *Integrated Ferroelectrics* 100 (2008) 16-25
- 35 - "Enhancement in nanoscale electrical properties of lead zirconic titanate island fabricated by focused ion beam", R.H. Liang, D. Rémiens, D. Deresmes, C. Soyer, D. Troadec, X.L. Dong, L.H. Yang, **R. Desfeux**, A. Da Costa and J.F. Blach, *Journal of Applied Physics* 105, 044101 (2009)
- 36 - "Probing of local ferroelectricity in BiFeO_3 thin films and $(\text{BiFeO}_3)_m(\text{SrTiO}_3)_m$ superlattices", R. Ranjith, U. Lüders, W. Prellier, A. Da Costa, I. Dupont and **R. Desfeux**, *Journal of Magnetism and Magnetic Materials* 321 (2009) 1710-1713

- 37 - "An easy sol-gel route for deposition of oriented $\text{Ln}_2\text{Ti}_2\text{O}_7$ (Ln=La, Nd) films on SrTiO_3 substrates", Z. Shao, S. Saitzek, P. Roussel, M. Huvé, **R. Desfeux**, O. Mentré and F. Abraham, *Journal of Crystal Growth* 311 (2009) 4134-4141
- 38 - "Integration and optimisation of PZT piezoelectric thin films in micro and nano dimensional structures", D. Rémiens, C. Soyer, D. Troadec, D. Deresmes, D. Jenkins, R. Yuang, G. Wang, X. Dong, A. Da Costa and **R. Desfeux**, *Micro and Nanosystems* 1 (2009) 214-225
- 39 - "Constrained ferroelectric domain orientation in $\text{BiFeO}_3/\text{SrTiO}_3$ heterostructures", R. Ranjith, R.V.K. Mangalam, Ph. Boullay, A. David, M.B. Lepetit, U. Lüders, W. Prellier, A. Da Costa, A. Ferri and **R. Desfeux**, Gy. Vincze, Zs. Radi and C. Aruta, *Applied Physics Letters* 96 (2010) 022902
- 40 - "Optical and electrical properties of Sn_2S_3 thin films grown by spray pyrolysis", M. Khadraoui, N. Benramdane, C. Mathieu, A. Bouzidi, R. Miloua, Z. Kebbab, K. Sahraoui and **R. Desfeux**, *Solid State Communications* 150 (2010) 297-300
- 41 - "Nanoscale study by piezoresponse force microscopy of relaxor $0.7\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - 0.3PbTiO_3 and $0.9\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - 0.1PbTiO_3 thin films grown on platinum and LaNiO_3 electrodes", M. Detalle, A. Ferri, A. Da Costa, **R. Desfeux**, C. Soyer and D. Rémiens, *Thin Solid Films* 518 (2010) 4670-4674
- 42 - "Synthesis of LiVO_3 thin films by spray pyrolysis technique", A. Bouzidi, N. Benramdane, M. Medles, M. Khadraoui, S. Bresson, C. Mathieu, **R. Desfeux** and M. El Marssi, *Journal of Alloys and Compounds* 503 (2010) 445-448
- 43 - "Structural and dielectric/ferroelectric properties of $(\text{La}_{1-x}\text{Nd}_x)_2\text{Ti}_2\text{O}_7$ synthesized by sol-gel route", Z. Shao, S. Saitzek, P. Roussel, O. Mentré, F. P. Gheorghiu, L. Mitoseriu and **R. Desfeux**, *Journal of Solid State Chemistry* 183 (2010) 1652-1662
- 44 - "Analysis of the degradation induced by focused Ga^{3+} ion beam for the realization of piezoelectric nanostructures", D. Rémiens, R.H. Liang, C. Soyer, D. Deresmes, D. Troadec, S. Quignon, A. Da Costa and **R. Desfeux**, *Journal of Applied Physics* 108, 042008 (2010)
- 45 - "Structural characterizations and photoluminescence properties of $(\text{La}_{1-x}\text{Sm}_x)_2\text{Ti}_2\text{O}_7$ solid solutions synthesized by sol-gel route", Z. Shao, S. Saitzek, J.F. Blach, A. Sayede, P. Roussel and **R. Desfeux**, *European Journal of Inorganic Chemistry* 24 (2011) 3569-3576
- 46 - "Microstructure and nanoscale piezoelectric investigations in $\text{La}_2\text{Ti}_2\text{O}_7$ thin films grown on (110)-oriented doped Nb: SrTiO_3 substrates", Z. Shao, S. Saitzek, E. Bruyer, A. Sayede, A. Ferri, M. Rguiti, P. Roussel, O. Mentré and **R. Desfeux**, *Advanced Engineering Materials* 13(10) (2011) 961-969
- 47 - "X-ray and Raman study of spray pyrolysed vanadium oxide thin films", A. Bouzidi, N. Benramdane, S. Bresson, C. Mathieu, **R. Desfeux** and M. El Marssi, *Vibrational Spectroscopy* 57(2) (2011) 182-186
- 48 - "Local electromechanical fatigue in PMN-PT ferroelectric thin films studied by piezoelectric force microscopy", A. Gatoux, A. Ferri, M. Detalle, D. Rémiens and **R. Desfeux**, *Thin Solid Films* 520 (2011) 591-594

- 49 - "Thickness effect on nanoscale electromechanical activity in PMN-PT thin films studied by piezoresponse force microscopy", A. Ferri, M. Detalle, J.F. Blach, M. Warenghem, D. Rémiens and **R. Desfeux**, *Journal of Applied Physics* 110 (2011) 104101
- 50 - "Evidence of ferroelectricity in metastable $\text{Sm}_2\text{Ti}_2\text{O}_7$ thin film", Z. Shao, S. Saitzek, A. Ferri, M. Rguiti, L. Dupont, P. Roussel and **R. Desfeux**, *Journal of Materials Chemistry* 22 (2012) 9806-9812
- 51 - "Investigation of microstructure in ferroelectric lead-free $\text{La}_2\text{Ti}_2\text{O}_7$ thin films grown on (001)- SrTiO_3 substrate", Z. Shao, S. Saitzek, P. Roussel, A. Ferri, O. Mentre and **R. Desfeux**, *CrystEngComm* 14 (20) (2012) 6524-6533
- 52 - "Stability limit of the layered-perovskite structure in $\text{Ln}_2\text{Ti}_2\text{O}_7$ (Ln = Lanthanide) thin films grown on (110)-oriented SrTiO_3 substrates by sol-gel route", Z. Shao, S. Saitzek, P. Roussel and **R. Desfeux**, *Journal of Materials Chemistry* 22 (47) (2012) 24894-24901
- 53 - "Fabrication of $\text{La}_2\text{Ti}_2\text{O}_7$ nanostructures by focused Ga^{3+} ion beam and characterization by piezoresponse force microscopy", G. Declercq, A. Ferri, Z. Shao, A. Bayart, S. Saitzek, **R. Desfeux**, D. Deresmes, D. Troadec, J. Costecalde and D. Rémiens, *IEEE Applications of Ferroelectrics* (2012) 1-3
- 54 - "Microstructural investigations and nanoscale ferroelectric properties in lead-free $\text{Nd}_2\text{Ti}_2\text{O}_7$ thin films grown on SrTiO_3 substrates by pulsed laser deposition", A. Bayart, S. Saitzek, M.H. Chambrier, Z. Shao, A. Ferri, M. Huvé, R. Pouhet, A. Tebano, P. Roussel, **R. Desfeux**, *CrystEngComm* 15 (21) (2013) 4341-4350