

LIS

Laboratoire d'ingénierie des systèmes de Vers

REVUES INTERNATIONALES 2005 - 2012 DE L'ÉQUIPE INSTRUMENTATION ET MODÉLISATION DES SYSTÈMES ET NANOSYSTÈMES AVANCÉS

[Revue Internationale 2005 - 2012](#)

2012

J. Lalevée, F. Dumur, C.R. Mayer, D. Gignes, G. Nasr, M-A Tehfe, S. Telitel, F. Morlet-Savary, B. Graff, J-P. Fouassier, Photopolymerization of N-vinylcarbazole using Visible Light Harvesting iridium Complexes as photoinitiators, *Macromolecules*, to be published in 2012.

F. Dumur, C.R. Mayer, Unexpected Ritter reaction during acid-promoted 1,3-Dithiol-2-one formation, *Helv. Chim. Acta*, to be published in 2012.

J.-P. Loisel, S. Topsu, L. Chassagne, Y. Alayli, P.R. Dahoo, P. Juncar, Generation of 656 nm Coherent Red-Light by Frequency-Doubled Nd:YLiF₄/BaB₂O₄ Laser for a Compact Silver Atoms Optical Clock, *International Journal of Metrology and Quality Engineering*, 3, 7-13 (2012).

A. Missoffe, L. Chassagne, S. Topsu, P. Ruaux, B. Cagneau, Y. Alayli, New simple optical sensor: from nanometer resolution to centimeter displacement range, *Sensors and Actuators A*, 176, 46-52 (2012). [PDF - 1 Mo]

F. Miomandre, R. Pansu, J.F. Audibert, A. Guerlin, C. Mayer, Electrofluorochromism of a ruthenium complex investigated by time resolved TIRF microscopy coupled to an electrochemical cell, *Electrochem. Comm.*, accepted paper (2012).

L. Benabou, Finite strain analysis of wood species under compressive failure due to kinking, to be published in *International Journal of Solids and Structures* (2012).

K. Ouedraogo, S. Topsu, J. Gayhmouni, L. Chassagne, Y. Alayli, P. Juncar, P. Gournay, F. Bielsa, G. Genevès, Accurate Ellipsometric Magnetic-Field Sensor Used to Align the LNE Watt Balance Magnetic Circuit, *Sensors and Actuators A*, 175, 9-14 (2012).

J-B Millet, F. Maroteaux, F. Aubertin, Air System and Diesel Combustion Modelling for Hardware in the Loop Applications. *Journal of Engineering for Gas Turbines and Power*, Vol 134, Issue 4, 042802 (2012).

2011

Y. Celnikier, L. Dupont, E. Hervé, G. Coquery, L. Benabou, Optimization of wire connections design for power electronics, *Microelectronics Reliability*, Vol. 51 (9-11), pp. 1892-1897 (2011).

Y. Celnikier, L. Benabou, L. Dupont, G. Coquery, Investigation of the heel crack mechanism in Al connections for power electronics modules, *Microelectronics Reliability*, Vol. 51 (5), pp. 965-974 (2011).

J. Nasser, S. Topsu, L. Chassagne, M. Wakim, B. Bennali, J. Linares, Y. Alayli, Two-dimensional atom-phonon coupling model for spin conversion: role of metastable states, *European Physical Journal B*, 83, 115-132 (2011).

K. Ouedraogo, S. Töpsu, L. Chassagne, P. RuauX, B. Cagneau, Y. Alayli, Compact and accurate concept of laser wavemeters based on ellipsometry, *Review of Scientific Instruments*, 82, 055112 (2011).

M. Paez Espejo, A. Gîndulescu, J. Linares, J. Nasser, M. Dimian, Phase diagram of 2D spin crossover systems using the atom – phonon coupling model, *Journal of Applied Physics*, 109, 07B102 (2011).

A. Gîndulescu, J. Linares, M. Dimian, A. Rotaru, J. Nassser, Analysis of phase transitions in spin-crossover compounds by using atom – phonon coupling model, *Journal of Phys*, 268, 012007 (2011).

A. Gîndulescu, A. Rotaru, J. Linares, M. Dimian and J. Nassser, Metastable states at low temperature in spin crossover compounds in the framework of the atom-phonon coupling model, In press in *Polyhedron* (2011) doi:10.1016/j.poly.2011.03.038.

S. Basseville, E. Hériprié, G. Cailletaud, "Numerical simulation of the third body in fretting problems *Wear*", Volume 270, Issues 11–12, 5 May 2011, Pages 876-887.

H. Proudhon, S. Basseville, Finite element analysis of fretting crack growth, *Engineering Fracture Mechanics*, 78, 4, 685-694 (2011). [PDF - 1 Mo]

L. Perret, L. Chassagne, S. Topcu, P. RuauX, B. Cagneau, Y. Alayli, Fiber optics sensor for sub-nanometric displacement and wide bandwidth systems, *Sensors and Actuators A*, 165, 189-193 (2011).

2010

A. Bolopion, B. Cagneau, S. Redon, S. Régnier, Comparing position and force control for interactive molecular simulators with haptic feedback, *Journal of Molecular Graphics and Modelling* 29, 280–289 (2010).

A. Gindulescu, A. Rotaru, J. Linares, M. Dimian, J. Nasser, Excited metastables electronic spin states in spin crossover compounds studies by atom-phonon couplig model: gradual and two-step transition cases, *Journal pf Applied Physics*, 107, 09A959 (2010).

Y. Guilhem, S. Basseville, F. Curtit, J-M.Stéphan, G.Cailletaud, Investigation of the effect

of grain clusters on fatigue crack initiation in polycrystals. International Journal of Fatigue, Vol 32, Issue 11, pp1748-1763 (2010). [PDF - 9 Mo]

L. Chassagne, S. Blaize, P. Ruaux, S. Topcu, P. Royer, Y. Alayli, G. Léron del, Multi-scale Scanning probe Microscopy, Review of Scientific Instruments, 81, 086101 (2010). [PDF - 758 Ko]

L. Benabou, Predictions of compressive strength and kink band orientation for wood species, Mechanics of Materials, Vol 42 pp. 335-343 (2010).

2009

S. Xu, L. Chassagne, S. Topcu, Y. Alayli, D-S. Li, Nanopositioning system based on polarimetric interferometer, Journal of China Institute of Metrology n°20 tome 2, 118-121 (2009).

A. Rotaru, J. Linares, S. Mordelet, A. Stancu, J. Nasser, Re-entrance Phase and Excited Metastable Electronic Spin States in Spin Crossover compounds Explained by Atom-Phonon Coupling Model, Journal of Applied Physics, 106 043507 (2009).

A. Rotaru, A. Carmona, F. Combaud, J. Linares, A. Stancu, J. Nasser, Monte Carlo simulations for 1- and 2D spin crossover compounds using the atomphonon coupling model, Polyhedron, 28 pp 1684-687 (2009).

G. Léron del, A. Sinno, L. Chassagne, S Blaize, P. Ruaux, A. Bruyant, S. Topçu, P.Royer, Y. Alayli, Enlarged near field optical imaging, Journal of [PDF - 314 Ko]Applied Physics, 106, 044913 (2009). [PDF - 314 Ko]

2008

A. Rotaru, E.Codjovi, J. Linares, J. Nasser, A. Stancu, Size and pressure effect in the atom-phonon coupling model for spin crossover compounds, Journal of Applied Physics 103 07B908 (2008).

S. Xu, K. Ouedraogo, L. Chassagne, S. Topçu,, P. Juncar, Y. Alayli Polarimetric interferometer for nanoscale positioning applications, Review of Scientific Instruments, 79, 125104 (2008). [PDF - 582 Ko]

2007

L. Chassagne, M. Wakim, S. Xu, S. Topçu, P. Ruaux, P. Juncar, Y. Alayli, 2D nano-positioning system with a sub-nanometric repeatability over millimetre displacement range, *Measurement Science and Technology* 18 (2007) 3267-3272. [PDF - 369 Ko]

A. Sinno, P. Ruaux, L. Chassagne, S. Topçu, Y. Alayli, G. Lerondel, S. Blaize, A. Bruyant, P. Royer, 2D Enlarged atomic force microscopy scanning scope: novel sample-holder device with millimetre range, *Review of Scientific Instruments*, 78, 095107 (2007). [PDF - 470 Ko]

J.A. Nasser, S. Topçu, L. Chassagne, A. Bousseksou, T. Guillon, Y. Alayli, 3d Electrons-molecular vibrations coupling in spin conversion compounds molecules: A quantitative study for the [Fe(phen)₂(NCS)₂] molecules, *Chemical Physics Letters*, 446 (2007) 385-390.

G. Genevès et al., The watt balance: toward a new definition of the mass unit ? *Revue française de Métrologie* n°96, 2007-1.

F. Maroteaux, L. Noel, A. Ahmed, Numerical investigations on methods to control the rate of heat release of HCCI combustion using reduced mechanism of n-heptane with multidimensional CFD code. *Combustion Theory and Modelling*, Volume 11, Number 4 2007, pp 501-525 ((2007).

2006

M. Wakim, S. Topçu, L. Chassagne, J. Nasser, Y. Alayli, P. Juncar, Highly accurate laser wavelength meter based on Doppler effect, *Optics Communications*, 262 (2006) 97-102. [PDF - 340 Ko]

S. Topçu, J. Nasser, L. M. Lawson Daku, S. Fritzsche, Ab initio calculations of external field shifts of the 661 nm quadrupolar clock transition in neutral Ag atoms, *Physical Review A*. 73, 042503 (2006).

J.P. Wallerand, M. Himbert, S. Topçu, Y. Alayli, M. Deneva, M. Nenchev, "Development of original techniques for realisation and study of the peculiarities of two-wavelength cw diode pumped Yb-doped crystal and red semiconductor lasers", *Journal of the Technical University at Plovdiv : Fundamental Sciences and Applications*, Bulgaria, pp 5-21, vol. 13 (3), 2006.

D. Haddad, M. Wakim, L. Chassagne, S. Topçu, P. Juncar, Y. Alayli, Position and velocity control at the nanometric scale in the LNE watt balance project, *Revue française de Métrologie* n°6, 2006-2.

F. Maroteaux, L. Noel, Development of a reduced n-heptane oxidation mechanism for HCCI combustion modeling. *Combustion and Flame* 146 pp 246-267 (2006).

2005

S. Topçu, L. Chassagne, Y. Alayli, P. Juncar, Improving the accuracy of homodyne Michelson interferometers using polarisation state measurement techniques, *Optics Communications*, Vol 247 pp:133-139, March 2005 [PDF - 283 Ko].

Y. Alayli, S. Topçu, L. Chassagne, J. Viennet, Compensation of the thermal influence on a high accuracy optical fibre displacement sensor, *Sensors and Actuators A : Physical*, Vol 120, Issue 2, pp343-348, May 2005. [PDF - 144 Ko]

L. Chassagne, S. Topçu, Y. Alayli, P. Juncar, Highly accurate positioning control method for piezoelectric actuators based on phase-shifting optoelectronics, *Measurement Science and Technology* 16 (2005) 1771-1777. [PDF - 406 Ko]

G. Genevès, P. Gournay, A. Gosset, M. Lecollinet, F. Villar, P. Pinot, P. Juncar, A. Clairon, A. Landragin, D. Holleville, F. Pereira Dos Santos, J. David, M. Besbes, F. Alves, L. Chassagne, S. Topçu, The watt balance project, *IEEE Transactions on Instrumentation and Measurements*, Special Issue on CPEM 2004, Vol 54 N°2, (ISSN0018-9456) pp 850-853, April 2005.

J. Nasser, Diluted spin conversion compounds behaviours in the atom-phonon coupling model: case of not too large dilution. Role of the Lennard-Jones potential? *European Physical Journal B*, 48, 19-27 (2005).