



Europass
Curriculum Vitae



PERSONAL INFORMATION

First name(s) / Surname(s)

Coriolan Viorel TIUSAN

Official address(es)

TECHNICAL UNIVERSITY OF CLUJ-NAPOCA (TUCN)

Department of Physics and Chemistry/
Center of Superconductivity, Spintronics and Surface Science (C4S)
Str. Memorandumului, no. 28, Cluj-Napoca, Romania

National Center of Scientific Research –CNRS-FRANCE

Telephone(s) +40-264 401 475 (RO) mobile: +40-732 893 750 (RO)

Fax(es) +40-264 592 055 (RO)

E-mail(s) Coriolan.Tiusan@phys.utcluj.ro
coriolan.tiusan@ijl.nancy-universite.fr

Web: <http://www.c4s.utcluj.ro/webperso/tiusan/welcome.html>

Researcher ID: <http://www.researcherid.com/rid/F-1564-2011>

Nationality Romanian, French

Date of birth 01.02.1972

Gender Male

WORK EXPERIENCE

Dates **Since 10/2013**

Occupation or position held **University Professor**, Department of Physics, **Technical University Cluj-Napoca, Romania.**

Main activities and responsibilities Research and development of spintronic devices with tailored magneto-transport properties

Mezomagnetism and spin polarized transport in low dimensional systems.
Electronic properties of low dimensional systems. Modelling of magnetism and electronic transport.

Project Coordinator: ID PN-II-PCE-2012-4-0315, No. UEFISCDI:23/29.08.2013.
Mezoscopic spintronic devices with tailored magnetotransport properties (SPINTAIL).

Project Coordinator: POS CCE Project: ID. 574, cod SMIS-CSNR 12467
Sectorial Operational Programme "Increase of Economic Competitiveness" Priority axis 2 – Research, Technological Development and Innovation for Competitiveness; Operation 2.1.2: „Complex research projects fostering the participation of high-level international experts” .

Teaching activities:

- *Elementary Physics, Advanced Physics* for students (license/bachelor level), Technical University of

Name and address of employer	Cluj-Napoca, Romania. - master degree level: <i>Advanced materials, micro and nanotechnologies</i> , Technical University of Cluj-Napoca, Romania and Babes Bolyai University Cluj-Napoca, Romania.
Type of business or sector	Technical University of Cluj-Napoca , Str. Memorandumului, no. 28, Cluj-Napoca, ROMANIA Department of Physics and Chemistry. Research activity developed within the Centre of Superconductivity, Spintronics and Surface Science.
Dates	09/2010-10/2013
Occupation or position held	Senior Researcher
Main activities and responsibilities	Main activities and responsibilities Functionalizing of research facilities of C4S (TUCN) for micro and nano-patterning of electronic devices. Mezomagnetism and spin polarized transport in low dimensional systems. Electronic properties of low dimensional systems. Modelling of magnetism and electronic transport. Project Coordinator: POS CCE Project: ID. 574, cod SMIS-CSNR 12467 Sectorial Operational Programme "Increase of Economic Competitiveness" Priority axis 2 – Research, Technological Development and Innovation for Competitiveness; Operation 2.1.2: „Complex research projects fostering the participation of high-level international experts” . Member of the National Council for the Certification of Academic Titles, Diplomas and Certificates (CNADTCU)the Ingeneering Science panel , Materials Engineering and Nanotechnology section (until 07/09/2012). Teaching activities - master degree level: <i>Advanced materials, micro and nanotechnologies</i> , Faculty of Material Science and Engineering, Technical University of Cluj-Napoca, Romania.
Name and address of employer	Technical University of Cluj-Napoca, Str. Memorandumului, no. 28, Cluj-Napoca, ROMANIA Centre of Superconductivity, Spintronics and Surface Science. Detached since 10/2010 from the National Center of Scientific Research (CNRS), FRANCE.
Type of business or sector	University, Public Research
Dates	Since 09/2005
Occupation or position held	Senior Researcher (Chargé de recherches 1ere classe-CNRS)
Main activities and responsibilities	Experimental and theory in solid state physics of low dimensional systems: surfaces, interfaces, thin films. Spin and symmetry polarized electronic transport, Micromagnetism and magnetic interactions, Electronic structure of low dimensional systems, Modelling of electronic transport in solid state devices. Member of nanomagnetism and spintronics team. Scientific expert in the French Ministry of Research General Direction for Research and Innovation (DGRI) Coordinator and member of PI team of French National Research Agency (ANR) and France-Spain collaboration projects. Advisor and/or c-advisor of 7 PHD theses, member/referee of 11 PHD/ Habilitation defences. Teaching activities at Henri-Poincaré University and National Polytechnic Institute of Lorraine (INPL), Nancy, France
Name and address of employer	National Center of Scientific Research (CNRS), France, Université Henri Poincaré Nancy, Laboratoire de Physique des Matériaux/ Institute Jean Lamour, Nancy, France
Type of business or sector	Public Research, University

Dates	09/2001- 09/2005
Occupation or position held	Research staff (Chargé de recherches 2eme classe-CNRS)
Main activities and responsibilities	Experimental and theory in solid state physics of low dimensional systems: surfaces, interfaces, thin films. Spin polarized electronic transport, Micromagnetism and magnetic interactions, Electronic structure of low dimensional systems Member of nanomagnetism and spintronics team Member of PI team of EC project <i>BLUEBERRIES</i> ' Projet MEDEA+ (Building-up Embedded Memories).
Name and address of employer	National Center of Scientific Research (CNRS), France Université Henri Poincaré Nancy, Laboratoire de Physique des Matériaux/ Institute Jean Lamour, Nancy, FRANCE
Type of business or sector	Public Research, University
Dates	09/2000-09/2001
Occupation or position held	Postdoctoral Researcher
Main activities and responsibilities	Member of PI team of EC project ' <i>NanoMEM</i> ' IST – 1999 – 13471:., <i>Developement of a new generation of nonvolatile random access magnetic memory based on magnetic tunnel junction elements</i> '. Design, elaboration and characterizations of devices, magnetism and spin polarized electronic transport modelling.
Name and address of employer	Louis Pasteur University Strasbourg - France/ Oxford University - United Kingdom, Siemens Laboratory – Germany
Type of business or sector	University, Public and Industrial Research
Dates	09/1997-09/2000
Occupation or position held	PHD researcher
Main activities and responsibilities	<i>Spin polarized transport in magnetic tunnel junctions. Correlation of micromagnetism and electronic transport properties. Applications to auto-motive sensors.</i> Member in PI team of EC project European Project ' <i>TUNNELSENSE</i> ' Brite Euram E 97-4961.
Name and address of employer	Louis Pasteur University- Strasbourg Institute of Physics and Chemistry of Materials Strasbourg (IPCMS) SIEMENS Research Laboratory, Erlangen, Germany
Type of business or sector	University, Public and Industrial Research
Dates	1996-1997
Occupation or position held	Research Assistant
Main activities and responsibilities	Electronic properties of surfaces, metallic catalysts, electronic structure of low-dimensional systems by ab-initio techniques. Analytical and numerical simulations in solid state physics.
Name and address of employer	National Centre of Research and Development for Isotopic and Molecular Technologies (INCDTIM), Cluj-Napoca, Romania
Type of business or sector	Public Research
EDUCATION AND TRAINING	
Dates	2008, 2013
Title of qualification awarded	University Professor Qualification

Principal subjects/occupational skills covered	Physics, Condensed Matter, Material Science
Name and type of organisation providing education and training	National Council of Universities France, the 28th section: Condensed Matter and Materials 15/02/2008 Qualification N°: 08128190583 - Validity 31 December 2012 http://textes.droit.org/JORF/2008/12/11/0288/0081/ 15/02/2013 Qualification N°: 13128190583- Validity 31 December 2017
Dates	2006
Title of qualification awarded	Habilitation Diploma / « Habilitation à diriger les recherches »
Principal subjects/occupational skills covered	<i>Equilibrium and out-of-equilibrium electronic properties in magnetic thin film multilayer systems: spintronics of magnetic tunneling devices</i> Thin film elaboration by MBE and sputtering, structural, magnetic and morphological characterization (RHEED, AFM, MFM, AGFM, SQUID, VSM), tunneling transport experiments, theoretical modeling of magnetism and spin polarized transport, electronic structure calculations by ab-initio techniques
Name and type of organisation providing education and training	Henri-Poincaré University, Nancy, France. Recognized in Romania by order of Education Ministry CNRED/MECTS, with the certificate Nr. 55874/28.12.2011.
Dates	1997-2000
Title of qualification awarded	PHD in Physics, European label, Summa cum Laude
Principal subjects/occupational skills covered	<i>Magnetism and spin polarized transport in Magnetic tunnel junctions: The use of tunnel transport as a micromagnetic probe</i> Thin film deposition techniques (sputtering, Molecular Beam Epitaxy) Optical lithography Atomic/magnetic force microscopy, magnetometry (AGFM, SQUID, VSM), transport spectroscopy
Name and type of organisation providing education and training	Louis Pasteur University Strasbourg, France Institute of Materials Physics and Chemistry, IPCMS Strasbourg, France SIEMENS Research Laboratories, Erlangen, Germany
Dates	1995-1996
Title of qualification awarded	Master in Physics
Principal subjects/occupational skills covered	Solid state physics and condensed matter Theoretical modelling, ab-initio band structure calculations <i>Influence de l'azote sur le magnétisme du Cr(001) par TB-LMTO</i>
Name and type of organisation providing education and training	Louis Pasteur University Strasbourg, France/ Institute of Materials Physics and Chemistry, IPCMS Strasbourg, France
Dates	1990-1995
Title of qualification awarded	Physicist Engineer
Principal subjects/occupational skills covered	<i>Computer simulation of XANES fine structures of supported metal catalysts</i> Analytical modelling and numerical simulation
Name and type of organisation providing education and training	Babes Bolyai University, Faculty of Physics, Cluj-Napoca-Romania Research activity for disertation diploma developed at the National Centre of Research and Development for Isotopic and Molecular Technologies (INCDTIM), Cluj-Napoca, Romania
Dates	1990
Title of qualification awarded	Baccalaureat
Principal subjects/occupational skills covered	Mining electrician qualification
Name and type of organisation	Petru Span High-School, Baia de Aries, Romania

providing education and training

Mother tongue(s)

Romanian

Language

English

French

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
C2	Proficient user	C1	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user

Computer skills and competences

Windows, Unix/Linux,
Microsoft Office, Dreamweaver
Specialized Software: Maple, Fortran, Pascal, C++, ORIGIN, Matlab, DFT calculations of solids (Wien2k -FPLAPW+I0 code), LayoutEditor.

ANNEXES

Patents
List of publications
Talks to conferences/invited talks

DISTINCTIONS/ AWARDS

12/2014 Excellence award of the Technical University Cluj-Napoca, Romania, rewarding the top scientific results obtained in 2013

12/2012 Prix "Constantin Miculescu" of the ROMANIAN ACADEMY

2008-2011 French national award for scientific excellence (PES)

2006 – BRONZE MEDAL of the National Centre of Scientific Research (CNRS- France) for the researches in the field of Spintronics
http://www.cnrs.fr/fr/recherche/prix/docs/2006bronze_web.pdf

11/2004 Grand Prix pour la Recherche of the Eastern Industrial Society, France, rewarding the technological research team of the Henri Poincaré University, Nancy, France.

11/2007 Grand Prix pour la Recherche of the Eastern Industrial Society, France, rewarding the nanomagnetism and spintronics team of the Henri-Poincaré University, Nancy, France

PATENTS

1/ Patent ULP/UHP N° 99 04 227 (Université Louis Pasteur Strasbourg/ Université Henri Poincaré Nancy) issue of 31 Mars 1999
"Dispositifs microélectroniques à jonctions tunnel et réseau de mémoires et capteur comprenant de tels dispositifs"

2,3/ Patents N°WO 97/41606 and GB0006142.4 by Clarendon Laboratory (Oxford).

BIBLIOMETRIC ANALYSIS

ISI Web of Science 12-21-2015

Results found : 94 ISI ranked papers
Total number of citations: 1352, excluding self-citations: 1096
Average citations/article: 14.38 Average citations/year: 84.5
H-index: 20

Google Scholar

Total number of citations: 1892
H-index: 23
i10 index: 48

REFERENCES

Prof. Albert FERT

Nobel Prize in Physics 2007

Paris-Sud University,

Member of the French Academy of Science, Scientific Director of the Unité Mixte de Physique CNRS/Thales, Orsay, France

albert.fert@thalesgroup.com

Prof. Alain SCHUHL

University of Grenoble, France,

Director of the Institute of Physics, CNRS, France

alain.schuhl@cnrs-dir.fr

Prof. John F. GREGG

Fellow and Tutor in Physics, Oxford University, Vice-President of the Magdalen College Oxford

j.gregg1@physics.ox.ac.uk

Prof. Evgeny Y. TSYMBAL

Charles Bessey Professor of Physics, Director of Materials Research Science and Engineering Center Lincoln, NE

tsymbal@unl.edu

Prof. Farkhad ALIEV

Department of Solid State Physics, Faculty of Science, Universidad Autonoma de Madrid

MAGNETRANS-UAM group leader

farkhad.aliev@uam.es

LIST OF PUBLICATIONS

BOOKS/ CHAPTERS

- 4) Chapter.V: *Characterization of Complex Spintronic and Superconducting Structures by Atomic Force Microscopy Techniques* in SCANNING PROBE MICROSCOPY – PHYSICAL PROPERTY CHARACTERIZATION AT NANOSCALE
L. Ciontea, M.S. Gabor, T. Petrisor Jr., T. Ristoiu, C. Tiusan and T. Petrisor,
Editat de către Vijay Nalladega, Aprilie 2012, ISBN 978-953-51-0576-3.
- 3) *Micromagnétisme et spintronique des jonctions magnétiques tunnel*
C. Tiusan
Editions Universitaires Européennes, 2011, 228 pagini, ISBN : 6131570264, 9786131570261.
- 2) "MECANICĂ CUANTICĂ PRIN APLICAȚII".
C. Tiusan, M. Gabor. T. Petrisor Jr.
Editura UTPRES 2013, 258 pagini, ISBN 978-973-662-825-2.
- 1) "MICRO ȘI NANOTEHNOLOGII. INDRUMĂTOR DE LABORATOR". *Tehnici de fabricare și caracterizare a filmelor subțiri cu aplicații în microelectronică*
C. Tiusan, T. Petrisor Jr., M. Gabor
Editura UTPRES 2013, 193 pagini, ISBN 978-973-662-824-5.

SCIENTIFIC MOVIE

Électronique de spin et capteurs magnétiques,

AUTHOR : Hehn Michel, Tiusan Coriolan

PRODUCER : Science En Cours RÉALISATEUR : UTLS - LA SUITE CANAL U France

http://www.canal-u.tv/video/science_en_cours/electronique_de_spin_et_capteurs_magnetiques.177

ISI RANKED PAPERS:

- 93 M Gueye, F Zighem, M Belmeguenai, MS Gabor, C Tiusan, D Faurie
Effective 90-degree magnetization rotation in Co₂FeAl thin film/piezoelectric system probed by microstripline ferromagnetic resonance
Applied Physics Letters 107 (3), 032908(2015).
- 92 MS Gabor, M Belmeguenai, T Petrisor Jr, C Ulhaq-Bouillet, S Colis, C. Tiusan
Correlations between structural, electronic transport, and magnetic properties of Co₂FeAl_{0.5}Si_{0.5} Heusler alloy epitaxial thin films
Physical Review B 92 (5), 054433 (2015).
- 91 MS Gabor, T Petrisor Jr, O Pop, S Colis, C Tiusan
Temperature dependence of the perpendicular magnetic anisotropy in Ta/Co₂FeAl/MgO structures probed by Anomalous Hall Effect
Journal of Magnetism and Magnetic Materials 392, 79-82 (2015).
- 90 AA Stashkevich, M Belmeguenai, Y Roussigné, SM Cherif, M Kostylev, M Gabor, D Lacour, C Tiusan, M Hehn
Experimental study of spin-wave dispersion in Py/Pt film structures in the presence of an interface Dzyaloshinskii-Moriya interaction
Physical Review B 91 (21), 214409 (2015).
- 89 A Duluard, C Bellouard, Y Lu, M Hehn, D Lacour, F Montaigne, G Lengaigne, S Andrieu, F Bonell, C Tiusan
Enhanced magnetoresistance by monoatomic roughness in epitaxial Fe/MgO/Fe tunnel junctions
Physical Review B 91 (17), 174403 (2015).
- 88 M Belmeguenai, MS Gabor, T Petrisor Jr, F Zighem, SM Chérif, C Tiusan
Capping layer-tailored interface magnetic anisotropy in ultrathin Co₂FeAl films
Journal of Applied Physics 117 (2), 023906 (2015).
- 87 M. Belmeguenai, H. Tuzcuoglua, M. Gabor, T. Petrisor Jr, C.Tiusan, D. Berling, F. Zighema, S. Mourad Chérif
Magnetic and structural properties of Co₂FeAl thin films grown on Si substrate
Journal of Magnetism and Magnetic Materials 373, 140–143 (2015).
- 86 M.-A. Leroy, A. M Bataille, B. Dkhil, F. Porcher, A. Barbier, V. LR Jacques, Y. Lu, C. Bellouard, T. Hauet, S. Ravy, J. Herrero-Martin, C. Gatel, K. Bouzehouane, A. Gukasov, S. Andrieu, C. Tiusan
Tunnel-mediated coupling between antiferromagnetic thin films

- 85 M Gueye, BM Wague, F Zighem, M Belmeguenai, MS Gabor, T Petrisor Jr, C Tiusan, S Mercone, D Faurie
Bending strain-tunable magnetic anisotropy in Co₂FeAl Heusler thin film on Kapton
Applied Physics Letters 105 (6), 062409 (2014).
- 84 M.S. Gabor, C. Tiusan, T. Petrisor Jr, T. Petrisor
The influence of the capping layer on the perpendicular magnetic anisotropy in permalloy thin films
accepted to be published in IEEE Trans. Magn. (2014), DOI: 10.1109/TMAG.2014.2320296
- 83 R. B. Gangineni, C. Bellouard, A. Duluard, B. Negulescu, C. Baraduc, G. Gaudin, and C. Tiusan
Interfacial electronic transport phenomena in single crystalline Fe-MgO-Fe thin barrier junctions
Applied Physics Letters 104, 182402 (2014).
- 82 M. Belmeguenai, H. Tuzcuoglu, M. S. Gabor, T. Petrisor, Jr., C. Tiusan, F. Zighem, S. M. Cherif, and P. Moch
Co₂FeAl Heusler thin films grown on Si and MgO substrates: annealing temperature effect
Journal of Applied Physics 115 (4), 043918 (2014).
- 81 M. Belmeguenai, H. Tuzcuoglu, M. Gabor, T. Petrisor Jr, C. Tiusan, D. Berling, F. Zighema, S. Mourad Chérif
Magnetic and structural properties of Co₂FeAl thin films grown on Si substrate
J. Magn. Mater. (2014), <http://dx.doi.org/10.1016/j.jmmm.2014.02.014>.
- 80 M.S. Gabor, C. Tiusan, T. Petrisor Jr, M. Hehn, E. Snoeck, T. Petrisor
Reduction of spin polarization by incoherent tunneling in Co₂FeAl/MgO/CoFe magnetic tunnel junctions with thick MgO barriers.
J. Magn. Mater. 347, 79–85, (2013).
- 79 M.S. Gabor, C. Tiusan, T. Petrisor Jr, T. Petrisor
Perpendicular magnetic anisotropy in Ta/Co₂FeAl/MgO multilayers
J. Appl. Phys. 114, 063905 (2013).
- 78 A. Kalitsov, P-J. Zermatten, F. Bonell, G. Gaudin, S. Andrieu, C. Tiusan, M. Chshiev, J. Velev
Bias dependence of tunneling magnetoresistance in asymmetric magnetic tunnel junctions
J. Phys.: Condens. Matter 25 (2013) 496005.
- 77 M. Belmeguenai, H. Tuzcuoglu, M.S. Gabor, T. Petrisor jr, C. Tiusan, T. Petrisor, D. Berling, S. M. Chérif and P. Moch
Co₂FeAl thin films grown on MgO substrates: Correlation between static, dynamic, and structural properties
Phys. Rev. B 87, 184431, (2013).
- 76 JP Cascales, L Martin, A Dulluard, M Hehn, C Tiusan, T Szczepański, V Dugaev, J. Barnas, F.G. Aliev
Shot Noise in Epitaxial Double-Barrier Magnetic Tunnel Junctions
IEEE TRANSACTIONS ON MAGNETICS 49 (7), 1, (2013).
- 75 Y. Lu, H. X. Yang, C. Tiusan, M. Hehn, M. Chshiev, C. Bellouard, B. Kierren, G. Lengaigne, A. Duluard, D. Lacour, F. Montaigne
Symmetry Dependent Scattering by Minority Interface Resonance States in Single-crystal Magnetic Tunnel Junctions
Physical Review B 86 184420 (2012).
- 74 T. Petrisor Jr, M. S. Gabor, C. Tiusan, V. Galluzzi, G. Celentano, S. Popa, A. Boule, T. Petrisor
Magnetic pinning effects of epitaxial La_(1-x)Sr_xMnO₃ nanostructured thin films on YBa₂Cu₃O_{7-δ} layers
Journal of Applied Physics 112, 053919 (2012).
- 73 J.P. Cascales, D. Herranz, F. G. Aliev, T. Szczepanski and V. K. Dugaev, J. Barnas, A. Duluard, M. Hehn, and C. Tiusan
Controlling shot noise in double-barrier magnetic tunnel junctions
Phys. Rev. Lett. 109, 066601 (2012).
- 72 D. Herranz, R. Guerrero, J.P. Cascales, F.G. Aliev, M. Hehn, C. Tiusan
Very strong reduction of 1/f noise by Carbon doping in epitaxial Fe/MgO(100)12ML/Fe magnetic tunnel junctions with large density of barrier defects
Acta Physica Polonica 121, 981, (2012).
- 71 M.S. Gabor, T. Petrisor Jr., C. Tiusan, M. Hehn, B.S. Vasile, and T. Petrisor
Influence of a TiO₂ buffer layer on the magnetic properties of anatase Co:TiO₂
Journal of Applied Physics 111, 083917 (2012).

- 70 A. Duluard, B. Negulescu, C. Bellouard, M. Hehn, D. Lacour, Y. Lu, G. Lengaigne, F. Montaigne, S. Robert, S. Suire, C. Tiusan
Fe/MgO/Fe (100) textured tunnel junctions exhibiting spin polarization features of single crystal junctions,
Appl. Phys. Lett. **100**, 072408 (2012)
- 69 P.-J. Zermatten, F. Bonell, S. Andrieu, M. Chshiev, C. Tiusan, A. Schuhl and G. Gaudin
Influence of an oxygen monolayer at the Fe/MgO interface on the transport properties in Fe/MgO/Fe(001) magnetic tunnel junctions,
Appl. Phys. Express **5**, 023001, (2012)
- 68 M.S. Gabor, T. Petrison Jr., C. Tiusan, M. Hehn, T. Petrison
Magnetic and structural anisotropies of Co₂FeAl Heusler alloy epitaxial thin films
Physical Review B **84**, 134413, (2011).
- 67 T. Petrison, Jr., M. S. Gabor, A. Boule, C. Bellouard, C. Tiusan, O. Pana, T. Petrison
Oxygen incorporation effects in annealed epitaxial La_{1-x}Sr_xMnO₃ thin films
Journal of Applied Physics **109**, 123913 (2011).
- 66 G. Ortiz, M. S. Gabor, T. Petrison Jr., F. Boust, F. Issac, C. Tiusan, M. Hehn, M., J.F. Bobo
Static and dynamic magnetic properties of epitaxial Co₂FeAl Heusler alloy thin films
Journal of Applied Physics **109** (7), art. no. 07D324, (2011).
- 65 T. Aubert, M. B. Assouar, O. Legrani, O. Elmazria, C. Tiusan, and S. Robert
Highly textured growth of AlN films on sapphire by magnetron sputtering for high temperature surface acoustic wave applications
J. Vac. Sci. Technol. A **29**(2) 021010-1, (2011).
- 64 F. Bonell, S. Andrieu, C. Tiusan, F. Montaigne, E. Snoeck, B. Belhadji, L. Calmels, F. Bertran, P. Le Fèvre, A. Taleb-Ibrahimi
Influence of misfit dislocations on the magnetoresistance of MgO-based epitaxial magnetic tunnel junctions
Physical Review B - Condensed Matter and Materials Physics **82** (9), 092405, (2010).
- 63 D. Herranz, F.G. Aliev, C. Tiusan, M. Hehn, V.K. Dugaev, J. Barnas
Tunneling in double barrier junctions with "hot spots"
Physical Review Letters **105**, 047207 (2010).
- 62 J. Bernos, M. Hehn, F. Montaigne, C. Tiusan, D. Lacour, M. Alnot, B. Negulescu, G. Lengaigne, E. Snoeck, and F. G. Aliev
Impact of electron-electron interactions induced by disorder at interfaces on spin-dependent tunneling in Co-Fe-B/MgO/Co-Fe-B magnetic tunnel junctions
Physical Review B **82**, RAPID COMM, 060405 (2010)
- 61 F. Montaigne, C. Tiusan, M. Hehn
Angular dependence of tunnel magnetoresistance and specificity of spin-filtering
Journal of Applied Physics, **108**(6), 063912, (2010).
- 60 F.G. Aliev, D. Herranz, A. Gomez-Ibarlucea, R. Villar, F. Bonell, S. Andrieu, C. Tiusan, F. Montaigne
Strongly suppressed 1/f noise and enhanced magnetoresistance due to reduced interface mismatch in epitaxial Fe-V/MgO/Fe magnetic tunnel junctions
Applied Physics Letters **96**, 202501 (2010).
- 59 M. B. Assouar, M. Dossot, S. Rizk, C. Tiusan, J. Bougdira
The use of microwave plasma-assisted CVD on nanostructured iron catalysts to grow isolated bundles of carbon nanotubes,
Nanotechnology **21**, 065708, (2010).
- 58 F. Bonell, S. Andrieu, F. Bertran, P. Lefevre, A.T. Ibrahimi, E. Snoeck, C. Tiusan, F. Montaigne
MgO-based epitaxial magnetic tunnel junctions using Fe-V electrodes
IEEE Transactions on Magnetics **45** (10), art. no. 5257273, pp. 3467-3471, (2009).
- 57 F. Bonell, S. Andrieu, A. M. Bataille, C. Tiusan, and G. Lengaigne
Consequences of interfacial Fe-O bonding and disorder in epitaxial Fe/MgO/Fe(001) magnetic tunnel junctions
Physical Review B **79**, 144413, (2009).
- 56 V. Serin, S. Andrieu, R. Serra, F. Bonell, C. Tiusan, L. Calmels, M. Varela, S. J. Pennycook, E. Snoeck, M. Walls, and C. Colliex
TEM and EELS measurements of interface roughness in epitaxial Fe/MgO/Fe magnetic tunnel junctions
Physical Review B **79**, 144413, (2009).

- 55 C. Bellouard, J. Faure-Vincent, C. Tiusan, F. Montaigne, M. Hehn, V. Leiner, H. Fritsche, M. Gierlings
Interlayer magnetic coupling in Fe/MgO junctions characterized by vector magnetization measurements combined with polarized neutron reflectometry
Physical Review B 78, 134429, (2008).
- 54 F. Bonell, A. Bataille, S. Andrieu, C. Tiusan, B. Kierren, G. Lengaigne, D. Lacour
Influence of interfacial oxygen on single-crystal magnetic tunnel junctions
EPJ Applied Physics 43 (3), pp. 357-361, (2008).
- 53 F. Bonell, A. Bataille, S. Andrieu, C. Tiusan, B. Kierren, G. Lengaigne, D. Lacour
Influence of interfacial oxygen on single-crystal magnetic tunnel junctions
EPJ Applied Physics 43 (3), pp. 357-361, (2008).
- 52 P.-J. Zermatten, G. Gaudin, G. Maris, M. Miron, and A. Schuhl,
C. Tiusan, F. Greullet, and M. Hehn
Experimental evidence of interface resonance states in single-crystal magnetic tunnel junctions
Physical Review B 78, 033301 (2008).
selected for the July 14, 2008 issue of Virtual Journal of Nanoscale Science & Technology
- 51 F. Greullet, E. Snoeck, C. Tiusan, M. Hehn, D. Lacour, O. Lenoble, C. Magen, L. Calmels
Large Inverse Magnetoresistance in Fully Epitaxial Fe/Fe₃O₄/MgO/Co Magnetic Tunnel Junctions
Applied Physics Letters 92, 053508 (2008).
- 50 E. Snoeck, P. Baules, G. BenAssayag,
C. Tiusan, F. Greullet, M. Hehn, A. Schuhl
Modulation of the Interlayer Exchange Coupling by Ion Irradiation in Magnetic Tunnel Junctions
Journal of Physics: Condensed Matter 20, 055219, (2008).
- 49 E. Snoeck, P. Baules, G. BenAssayag,
C. Tiusan, F. Greullet, M. Hehn, A. Schuhl
Modulation of the Interlayer Exchange Coupling by Ion Irradiation in Magnetic Tunnel Junctions
Journal of Physics: Condensed Matter 20, 055219, (2008).
- 48 F.G. Aliev, R. Guerrero, D. Herranz, R. Villar,
F. Greullet, C. Tiusan, M. Hehn
Very low 1/f noise at room temperature in fully epitaxial Fe/MgO/Fe magnetic tunnel junctions
Applied Physics Letters 91, 232504, (2007).
- 30 F. Greullet, C. Tiusan, F. Montaigne, M. Hehn,
D. Halley, O. Bengone, M. Bowen, W. Weber
Evidence of a Symmetry-Dependent Metallic Barrier in Fully Epitaxial MgO based Magnetic Tunnel Junctions
Physical Review Letters 99, 187202, (2007).
One of the figures has been chose as cover letter of the PRL week issue
- 47 R. Guerrero, D. Herranz, F.G. Aliev,
F. Greullet, C. Tiusan, M. Hehn, F. Montaigne
High Bias Voltage Effect on Spin-Dependent Conductivity and Shot Noise in Carbon-doped Fe(001)/MgO(001)/ Fe(001) Magnetic Tunnel Junctions
Applied Physics Letters 91, 132504, (2007).
- 46 E. Popova, N. Keller, F. Gendron, C. Tiusan, A. Schuhl, N. Lesnik
Temperature dependence of the interlayer exchange coupling in epitaxial Fe₁/MgO/Fe₂/Co tunnel junctions
Applied Physics Letters 91, 112504 (2007).
- 45 M. B. Assouar, O. Elmazria, P. Kirsch, P. Alnot, V. Mortet, C. Tiusan
High-frequency surface acoustic wave devices based on AlN/diamond layered structure realized using e-beam lithography
Journal of Applied Physics 101, 114507 (2007).
- 44 M. B. Assouar, O. Elmazria, C. Tiusan, P. Alnot
Low temperature growth of sputtered AlN films for layered structure SAW devices
Integrated Ferroelectrics 91, 119-128, (2007).
- 43 C. Tiusan, M. Hehn, F. Montaigne, F. Greullet, S. Andrieu, A. Schuhl

Spin tunneling phenomena in single crystal magnetic tunnel junction systems

Journal of Physics: Condensed Matter 19, 165201, (2007) [special issue dedicated to Spintronics].

selected in Top Papers of 'Journal of Physics: Condensed Matter' 2007

<http://herald.iop.org/jpcmauthors/m1/jqr/deliver/Toppapers2007.pdf>

- 42 Gabor, M.S., Petrisor Jr., T., Tiusan, C.V.
Exchange coupling in Co/Ru/Co and Fe/MgO/Fe multilayered structures
AIP Conference Proceedings 899, pp. 627(2007).
- 41 E. Popova, C. Tiusan, F. Gendron, A. Schuhl, N.A. Lesnik
Ferromagnetic resonance in the epitaxial system Fe/MgO/Fe with coupled magnetic layers
Physical Review B 74, 224415 (2006).
- 40 C. Tiusan, M. Sicot, J. Faure-Vincent, M. Hehn, C. Bellouard, F. Montaigne, S. Andrieu, A. Schuhl
Static and dynamic aspects of spin tunneling in crystalline magnetic tunnel junctions.
Journal of Physics: Condensed Matter 18, 941-956 (2006).
- 39 C. Tiusan, M. Sicot, M. Hehn, C. Bellouard, S. Andrieu, F. Montaigne, A. Schuhl
Fe/MgO interface engineering for high output voltage device applications.
Applied Physics Letters 88, 62512, (2006).
- 38 C. de Buttet, M. Hehn, F. Montaigne, C. Tiusan, G. Malinowski, A. Schuhl, E. Snoeck, S. Zoll
Low-resistance magnetic tunnel junctions with an alumina - magnesium oxide composite tunnel barrier: self limited oxidation material, asymmetric transport characteristics and free electron modeling
Physical Review B 73, 104439, (2006).
- 37 C. Tiusan, J. Faure-Vincent, M. Sicot, M. Hehn, C. Bellouard, F. Montaigne, S. Andrieu, A. Schuhl
Spin filtering effects in monocrystalline Fe/MgO/Fe magnetic tunnel junctions
Materials Science and Engineering B, Vol. 126 / 2-3, 112-119, (2006).
- 36 C. Tiusan, F. Greullet, M. Sicot, M. Hehn, C. Bellouard, F. Montaigne, S. Andrieu, A. Schuhl
Engineering of spin-filtering in double epitaxial tunnel junctions
Journal of Applied Physics, Vol. 99, 08D301, (2006).
- 35 M. Sicot, S. Andrieu, C. Tiusan, F. Bertran, F. Montaigne
On the quality of MBE grown Fe/MgO and Co/MgO (001) interfaces
Journal of Applied Physics Vol. 99, 08A903, (2006).
- 34 Sicot, M., Andrieu, S., Tiusan, C., Montaigne, F., Schuhl, A.
Inverse TMR in the Fe/MgO/Fe(001) epitaxial system
INTERMAG 2006 - IEEE International Magnetism Conference, art. no. 4262297, pp. 864 (2006).
- 33 C.L. Dennis, C. Tiusan, R.A. Ferreira, J.F. Gregg, G.J. Ensell, S.M. Thompson and P.P. Freitas
Tunnel barrier fabrication on Si and its impact on a spin transistor.
Journal of Magnetism and Magnetic Materials, Vol. 290-291, 1383-1386, Part 2, (2005).
- 32 Cindi Dennis, Coriolan Tiusan, John Gregg, Graham Ensell, Sarah Thompson
Silicon Spin Diffusion Transistor: Materials, Physics, and Device Characteristics
IEEE Proceedings - Circuits, Devices and Systems 152, 340, (2005).
- 31 Assouar, M.B., Elmazria, O., Hakiki, M.El., Alnot, P., Tiusan, C.
Low temperature AlN thin films growth for layered structure saw and baw devices
IEEE International Symposium on Applications of Ferroelectrics, art. no. FE1-C-5, pp. 43-46 (2005).
- 30 C. Tiusan, J. Faure-Vincent, C. Bellouard, M. Hehn, E. Jouguelet, A. Schuhl
Interfacial resonance state probed by spin polarized tunneling in epitaxial Fe/MgO/Fe tunnel junctions
Physical Review Letters 93, 106602 (2004).
- 29 M.B. Assouar, M. El Hakiki, O. Elmazria, P. Alnot, C. Tiusan
Synthesis and microstructural characterisation of reactive RF magnetron sputtering AlN films for surface acoustic wave filters
Diamond and Related Materials 13, 1111-1115, (2004).
- 28 N. Aldea, C. Tiusan, B. Barz

A new X-ray line profile approximation used for the evaluation of the global nanostructure of nickel clusters
Journal of Optoelectronics and Advanced Materials Vol. 6, No. 1, 225-235, (2004).

- 27 M. Hehn, C. de Buttet, G. Malinowski, E. Snoeck, C. Tiusan, F. Montaigne
Low-height sputter-deposited magnesium oxide tunnel barriers: experimental report and free electron modeling
The European Physical Journal B 40, 19, (2004).
- 26 T. Dimopoulos, Y. Henry, V. Da Costa, C. Tiusan, and K. Ounadjela
Influence of barrier overoxidation and annealing on the inelastic spin-dependent tunneling in AlO_x-based junctions
Journal of Applied Physics, 95 (11), 6936, (2004).
- 25 J. Faure-Vincent, C. Tiusan, E. Jouguelet, F. Canet, M. Sajieddine, C. Bellouard, E. Popova, M. Hehn, F. Montaigne, A. Schuhl
High TMR in epitaxial Fe/MgO/Fe tunnel junctions
Applied Physics Letters 82, 4507 (2003).
- 24 J. Faure-Vincent, C. Tiusan, C. Bellouard, E. Popova, M. Hehn, F. Montaigne, A. Schuhl
Antiferromagnetic coupling by spin polarized quantum tunnelling
Journal of Applied Physics, 93 (10), 7519, (2003).
- 23 C. Tiusan, M. Hehn, K. Ounadjela
Magnetic-roughness-induced magnetostatic interactions in magnetic tunnel junctions.
European Physical Journal B 26 (4), 431, (2002).
- 22 E. Popova, J. Faure-Vincent, C. Tiusan, C. Bellouard, H. Fischer, E. Snoeck, M. Hehn, F. Montaigne, V. da Costa, M. Alnot, S. Andrieu, A. Schuhl
Epitaxial MgO layer for low resistance and coupling free magnetic tunnel junctions.
Applied Physics Letters 81, 1035 (2002).
- 21 J. Faure-Vincent, C. Tiusan, C. Bellouard, E. Popova, M. Hehn, F. Montaigne and A. Schuhl
Interlayer magnetic coupling interactions of two ferromagnetic layers by spin polarized tunneling
Physical Review Letters 89, 107206, (2002).
- 20 T. Dimopoulos, C. Tiusan, Y. Henry, V. da Costa, K. Ounadjela and H. A. M. van den Berg
Compensation of magnetostatic interactions in magnetic tunnel junctions with artificial antiferromagnets
Journal of Magnetism and Magnetic Materials, 242-245, Part 1, 512, (2002).
- 19 C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn
Field-dependent domain structure evolution in artificial ferrimagnets analyzed by spin-polarized tunnel transport in magnetic tunnel junctions.
Physical Review B 64 (10), 104423, (2001).
- 18 T. Dimopoulos, V. Da Costa, C. Tiusan, K. Ounadjela, H. van den Berg
Interfacial phenomena related to the fabrication of thin Al oxide tunnel barriers and their thermal evolution.
Applied Physics Letters 79 (19), 3110, (2001).
- 17 C. Tiusan, M. Chshiev, A. Iovan, V. da Costa, D. Stoeffler, T. Dimopoulos, K. Ounadjela
Quantum coherent transport versus diode-like effect in semiconductor-free metal/insulator structure.
Applied Physics Letters 79 (25), 4231, (2001).
- 16 D. Lacour, M. Hehn, O. Lenoble, A. Schuhl, C. Tiusan, K. Ounadjela
Domain duplication in ferromagnetic sandwiches
Journal of Applied Physics 89 (12), 8006, (2001).
- 15 C. Tiusan, M. Hehn, T. Dimopoulos, K. Ounadjela
Spin polarized tunneling as a probe for quantitative analysis of field dependent domain structure in magnetic tunnel junctions
Journal of Applied Physics 89 (11), 6668, (2001).
- 14 C. Tiusan, T. Dimopoulos, L. Buda, V. Da Costa, K. Ounadjela, M. Hehn, H. van den Berg
Magnetostatic interactions in artificial ferrimagnet based magnetic tunnel junctions
Journal of Applied Physics 89 (11), 6811, (2001).
- 13 T. Dimopoulos, V. Da Costa, C. Tiusan, K. Ounadjela, H. van den Berg
Local investigation of thin insulating barriers incorporated in magnetic tunnel junctions

- Journal of Applied Physics** 89 (11), 7371, (2001).
- 12 Hehn,-M.; Lenoble,-O.; Lacour,-D.; Schuhl,-A.; Tiusan,-C.; Hrabovsky,-D.; Bobo,-J.-F.
Magnetoresistance and induced domain structure in tunnel junctions
Applications-of-Ferromagnetic-and-Optical-Materials,-Storage-and-Magnetolectronics-Materials-Research-Society-Symposium 2001.
 - 11 C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn, H. van den Berg, V. da Costa, Y. Henry
Tunnel magnetoresistance versus micromagnetism in magnetic tunnel junctions
Journal of Applied Physics 87 (9), 4676,(2000).
 - 10 T. Dimopoulos, C. Tiusan, K. Ounadjela, M. Hehn, H. van den Berg, Y. Henry, V. da Costa
Enhanced robustness and tunnel magnetoresistance in artificial ferrimagnet based tunnel junctions
Journal of Applied Physics 87 (9), 4865, (2000).
 - 9 C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn, H. van den Berg, V. da Costa, Y. Henry
Correlation between micromagnetism and tunnel magnetoresistance in magnetic tunnel junctions using artificial ferrimagnets.
Physical Review B 61 (1), 580, (2000).
 - 8 V. Da Costa, C. Tiusan, T. Dimopoulos, K. Ounadjela
Tunneling phenomena as a probe to investigate atomic scale fluctuations in metal/oxide/metal magnetic tunnel junctions.
Physical Review Letters 85, (4), 876,(2000).
 - 7 T. Dimopoulos, C. Tiusan, V. Da Costa, K. Ounadjela, H. van den Berg
Enhancement of the thermal stability of magnetic tunnel junctions employing artificial ferrimagnets.
Applied Physics Letters 77, (22), 3624, (2000).
 - 6 M. Hehn, O. Lenoble, D. Lacour, C. Fery, M. Piecuch, C. Tiusan, K. Ounadjela
Tunneling magnetoresistance and induced domain structure in Al₂O₃-based junctions.
Physical Review B 61 (17), 11643, (2000).
 - 5 C. Tiusan, M. Hehn, K. Ounadjela, Y. Henry, J. Hommet, C. Meny, H. van den Berg, L. Baer, R. Kinder
Artificial antiferromagnetic tunnel junction sensors based on Co/Ru/Co sandwiches.
Journal of Applied Physics 85 (8), 5276, (1999).
 - 4 C. Tiusan, C. Morari, N. Aldea, G. Moraitis, C. Demangeat
Nitrogen adsorption induced influence on electronic and magnetic properties of the Cr surface by ab-initio TB-LMTO studies.
Balkan Physics Letters 6 (4), 232, (1998).
C. Tiusan, N. Aldea
Dipole transition in K-edge of XAS.
Romanian Journal of Physics 42 (1-2), 57, (1997).
 - 3 N. Aldea, C. Tiusan, R. Zapotinschi
A new approach used to evaluation the crystallite size of supported metal catalysts by single X-ray profile Fourier transform implemented on Maple V
Proceedings of the 8th Joint EPS-APS International Conference on Physics Computing, PC '96.
Acad. Comput. Centre CYFRONET-KRAKOW, Cracovie, Poland, 391, (1996).
 - 2 N. Aldea, C. Tiusan, A. Chezan,
Full multiple scattering approximation to K-XANES of supported metal catalysts.
Physica B, 208, (1995).
 - 1 N. Aldea, C. Tiusan, A. Chezan,
Computer modelling to K XANES spectra of the supported metal catalysts.
Proceedings of the 6th Joint EPS-APS International Conference on Physics Computing.
PC'94. Physics Computing '94. Eur. Phys. Soc, Genève, Suisse, 595, (1994).

CONFERENCES:

Perpendicular magnetic anisotropy of Co₂FeAl Heusler alloy thin films grown on flexible kapton substrates

M. Gabor, T. Petrisor jr., C. Tiusan, M. Belmeguenai, F. Zighem, D. Faurie

ORAL

20th International Conference on Magnetism, July 5-10, Barcelona, Spain

The influence of the capping layer on the perpendicular magnetic anisotropy in permalloy thin films

M.S. Gabor, T. Petrisor jr., T. Petrisor, C. Tiusan

ORAL

IEEE International Magnetism Conference, INTERMAG Europe 2014, May 4th –May 8th, 2014, Dresden, Germany.

Interfacial electronic transport phenomena in single crystalline Fe-MgO-Fe thin barrier junctions

C. Tiusan, R. Babu Gangineni, C. Bellouard, A. Duluard, B. Negulescu, C. Baraduc, G. Gaudin

ORAL

IEEE International Magnetism Conference, INTERMAG Europe 2014, May 4th –May 8th, 2014, Dresden, Germany.

Electron scattering mechanisms and temperature variation of perpendicular magnetic anisotropy in Co₂FeAl thin films

M.S. Gabor, T. Petrisor jr., S. Colis, T. Petrisor, C. Tiusan

ORAL

IEEE International Magnetism Conference, INTERMAG Europe 2014, May 4th –May 8th, 2014, Dresden, Germany.

Spintronics with single crystal magnetic tunnel junctions

C. Tiusan

INVITED PAPER

9th International Conference on Physics of Advanced Materials, 20 - 23 September 2012, Iasi, Romania

Spin and charge transport in single crystal magnetic tunnel junctions

C. Tiusan

INVITED PAPER

Processes In Isotopes And Molecules" 2011, September 29 - October 01, Cluj-Napoca, Romania

Antiferromagnetic coupling versus (100)Fe interfacial resonant state in Fe/MgO/Fe junctions.

A. Duluard, C. Bellouard, C. Tiusan, B. Negulescu, D. Lacour, M. Hehn and F. Montaigne

ORAL

The 56th Magnetism and Magnetic Materials Conference Scottsdale, Arizona, USA, October 30-November 3 2011

Spin polarized transport in (100) textured Fe/MgO/Fe tunnel junctions

A. Duluard, B. Negulescu, C. Tiusan, C. Bellouard,

M. Hehn, Y. Lu, G. Lengaigne and D. Lacour

The 56th Magnetism and Magnetic Materials Conference Scottsdale, Arizona, USA, October 30-November 3 2011

Corrélation entre couplage AF et structure électronique dans les jonctions tunnel épitaxiées

ORAL

A. Duluard, C. Bellouard, C. Tiusan, B. Negulescu, D. Lacour, M. Hehn, F. Montaigne

XIVe Colloque Louis Néel, Brest-Océanopolis, France, 21-23 sept. 2011

Transport polarisé en spin dans les jonctions Fe/MgO/Fe texturés -Poster

A. Duluard, B. Negulescu, C. Tiusan, C. Bellouard, M. Hehn, Y. Lu, G. Lengaigne, F. Montaigne

XIVe Colloque Louis Néel, Brest-Océanopolis, France, 21-23 sept. 2011

Influence of carbon-doping on 1/f noise in fully epitaxial Fe/MgO/Fe magnetic tunnel junctions

ORAL

D. Herranz, R. Guerrero, F. Greullet, M. Hehn, C. Tiusan, and F.G. Aliev

*Recent Trends in Nanomagnetism, Spintronics and their Applications
San Sebastian, Spain, 1-4 June 2011*

Static and dynamic magnetic properties of epitaxial Co₂FeAl Heusler alloy thin films.

G. Ortiz, M. Gabor, T. Petrisor Jr., C. Tiusan, F. Issac, F. Boust and J. Bobo

ORAL

The 55th Magnetism and Magnetic Materials Conference, 14-18 November, Atlanta, Georgia, USA, 2010.

Noise spectroscopy in fully epitaxial Fe/MgO/Fe magnetic tunnel junctions.

ORAL

F.G. Aliev, D. Herranz, A. Gomez-Ibarlucea, C. Tiusan, F. Bonell, S. Andrieu

The 55th Magnetism and Magnetic Materials Conference, 14-18 November, Atlanta, Georgia, USA, 2010.

Voltage dependent exchange coupling in single crystal MgO based magnetic tunnel junction.

R. Gangineni, P. Zermatten, M. Thornton, M. Delaye, L. Vila, G. Gaudin, C. Baraduc, A. Schuhl, B. Negulescu, A. Duluard, C. Tiusan, C. Bellouard, M. Hehn, S. Andrieu

The 55th Magnetism and Magnetic Materials Conference, 14-18 November, Atlanta, Georgia, USA, 2010.

Tunnel coupling between antiferromagnetic thin films

A.M. Bataille, C. Tiusan, F. Porcher, A. Barbier, C. Gatel, V.L. Jacques, Y. Lu, S. Ravy, B. Dkhil and A. Gukasov

11th Joint MMM/Intermag Conference Washington DC, January 18-22, 2010.

Mechanism of magnetotransport properties modulation via interfacial electronic structure in single crystal Fe-MgO-Fe tunnel junctions

C. Tiusan, H. Yang, M. Chshiev, F. Greullet, C. Bellouard, Y. Lu, F. Montaigne and M. Hehn

11th Joint MMM/Intermag Conference Washington DC, January 18-22, 2010.

Influence of MgO barrier dislocations density on magnetotransport in fully epitaxial tunnel junctions

S. Andrieu, F. Bonell, F. Bertran, P. Lefevre, A. Taleb, E. Snoeck, J. Ben Youssef, C. Tiusan and F. Montaigne

11th Joint MMM/Intermag Conference Washington DC, January 18-22, 2010.

Fabrication Of Single Crystal Magnetic Tunnel Junction Nano-Pillars For Rf Measurements

R. B. Gangineni, M.T. Delaye, L. Vila, C. Baraduc, A. Schuhl, B. Negulescu, A. Duluard, C. Bellouard, C. Tiusan, M. Hehn

13ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", Albé/Strasbourg, 2010.

Mechanism of Magnetotransport Properties Modulation via Interfacial Electronic Structure in Single Crystal Fe-MgO-Fe Tunnel Junctions

C. Tiusan, Hongxin YANG, M. Chshiev, F. Greullet, C. Bellouard, Y. Lu, F. Montaigne, M. Hehn,

13ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", Albé/Strasbourg, 2010.

MgO based epitaxial magnetic tunnel junctions using Fe_{1-x}V_x electrodes

F. Bonell, S. Andrieu, C. Tiusan and F. Montaigne

IEEE INTERMAG 2009 Conference, Sacramento, California, USA, 4 to May 8, 2009

INVITED PAPER

Electronic transport signature of oxygen in the fully epitaxial Fe/O/MgO/Fe system - toward the understanding of the AF coupling for thin barriers

P.-J. Zermatten, F. Bonell, G. Gaudin, S. Andrieu, C. Tiusan, M. Chshiev, A. Schuhl

20th International Colloquium on Magnetic Films and Surfaces, Berlin 20-24 July, 2009

Role of interface resonance states on spin dependent transport in single crystal magnetic tunnel junctions

A. Schuhl, P.-J. Zermatten, G. Gaudin, C. Tiusan, F. Greulet, M. Hehn

SPIE Conference, San Diego, California, (USA), 10-14 August 2008

INVITED PAPER

Role of interface resonance states on spin dependent transport in single crystal magnetic tunnel junctions

P.- J. Zermatten, M. Miron, G. Gaudin, A. Schuhl, F. Greullet, M. Hehn et C. Tiusan

Joint European Magnetic Symposia, Dublin, (Irlande), Septembre 2008

Role of interface resonance states on spin dependent transport in single crystal magnetic tunnel junctions

P.- J. Zermatten, M. Miron, G. Gaudin, A. Schuhl, F. Greullet, M. Hehn et C. Tiusan

Magnetism and Magnetic Materials Conference, Austin, (USA), Novembre 2008

Low frequency noise in single crystal epitaxial Fe/Fe-C/MgO/Fe(001) magnetic tunnel junctions

F. Greullet, D. Heranz, R. Guerrero, F. G. Aliev, C. Tiusan, M. Hehn, R. Villar, D. Lacour, F. Montaigne, G. Lengaigne

12ème Colloque Louis Néel, 1-3 Octobre 2008, La Grande Motte

Influence of surface states on tunnel transport in single crystal Fe/MgO/Fe magnetic tunnel junctions

P.-J. Zermatten, G. Gaudin, M. Miron, A. Schuhl, C. Tiusan, F. Greullet, M. Hehn
12ème Colloque Louis Néel, 1-3 Octobre 2008, La Grande Motte

Interfacial oxygen in epitaxial Fe/MgO/Fe magnetic tunnel junctions

F. Bonell, S. Andrieu, C. Tiusan, A. Bataille, B. Kierren, F. Montaigne
12ème Colloque Louis Néel, 1-3 Octobre 2008, La Grande Motte

Equilibrium and out-of-equilibrium spintronic phenomena in single crystal MgO based magnetic tunnel junctions

C. Tiusan, F. Greullet, F. Bonell, M. Hehn, S. Andrieu, C. Bellouard, F. Montaigne, D. Halley, M. Bowen, W. Weber, E. Snoeck, F. Aliev, E. Popova, A. Schuhl
INTERMAG 2008 Conference, Madrid, 4 -8 Mai, 2008.

INVITED PAPER

PRODUCTION SCIENTIFIQUE Coriolan TIUSAN, CR1 CNRS, IJL, UMR7198

Influence of interfacial oxygen on spin filtering and antiferromagnetic coupling in single-crystalline Fe/MgO/Fe(001) magnetic tunnel junctions

F. Bonell, S. Andrieu, C. Tiusan, A. M. Bataille, B. Kierren, F. Montaigne, G. Lengaigne
INTERMAG 2008 Conference, Madrid, 4 -8 Mai, 2008.

The Surface Electronic Structure: a Key Parameter in Low Resistance Area Single Crystal Magnetic Tunnel Junctions

P. Zermatten, M. Miron, G. Gaudin, A. Schuhl, F. Greullet, M. Hehn, C. Tiusan
INTERMAG 2008 Conference, Madrid, 4 -8 Mai, 2008.

High bias tunneling magnetoresistance and low frequency noise in fully epitaxial Fe/C/MgO/Fe(001) magnetic tunnel junctions

D. Herranz, R. Guerrero, R. Villar, F. G. Aliev, F. Greullet, C. Tiusan, M. Hehn
INTERMAG 2008 Conference, Madrid, 4 -8 Mai, 2008.

High bias voltage effect on spin-dependent conductivity and low frequency noise in epitaxial Fe/MgO/Fe magnetic tunnel junctions

F. Aliev, R. Guerrero, D. Herranz, R. Villar, F. Greullet, C. Tiusan, M. Hehn, F. Montaigne
2008 APS March Meeting – New Orleans, Louisiana, USA – March 2008

Caractérisation du couplage magnétique dans les jonctions Fe/MgO/Fe par mesure vectorielle d'aimantation et réflectométrie de neutrons polarisés

C. Bellouard, J. Faure-Vincent, C. Tiusan, F. Montaigne, M. Hehn, V. Leiner, H. Fritzsche, M. Gierlings
12ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", La Grande Motte, 1-3 octobre 2008.

Amélioration structurale de la barrière de MgO dans les jonctions tunnel épitaxiées

F. Bonnell, S. Andrieu, C. Tiusan, F. Montaigne
12ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", La Grande Motte, 1-3 octobre 2008.

Spin and symmetry filtering in epitaxial tunnel junctions

C. Tiusan, F. Greullet, M. Hehn, S. Andrieu, F. Montaigne, C. Bellouard
7th France-Japan Workshop on Nanosciences and Nanomaterials, Strasbourg, 24-26 October 2007.

INVITED PAPER

Interlayer Exchange Coupling in single crystal Magnetic Tunnel Junctions

C. Tiusan, F. Greullet, M. Hehn, E. Snoeck, P. Baules, G. BenAssayag, A. Schuhl
WUN-SMT07 Spintronic Materials and Technology, York, UK, 7-10 August 2007.

INVITED PAPER

Symmetry-dependent tunnelling barrier and quantum well effects in single crystal Fe/Cr/MgO/Fe junctions

C. Tiusan, F. Greullet, D. Halley, F. Montaigne, G. Lengaigne, J. Arabski, M. Hehn, W. Weber
Journées scientifiques dans le cadre du C-NANO Grand Est, Strasbourg, 8-9 Octobre 2007.

Modulation des effets de filtrage par insertion de bcc Cr(001) fin dans des jonctions tunnel monocristallines Fe/Cr/MgO/Fe(001)

F. Greullet, D. Halley, C. Tiusan, M. Hehn, F. Montaigne, G. Lengaigne, J. Arabski, W.

Weber, O. Bengone, D. Lacour

11ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", Valpré Lyon, 14-16 mars 2007.

Spin polarized tunnelling in single crystal Fe/Cr/MgO/Fe junctions

C. Tiusan, F. Greullet, D. Halley, F. Montaigne, G. Lengaigne, J. Arabski, M. Hehn, W. Weber
10th Joint MMM/Intermag Conference, Baltimore Maryland, USA, 7-11 January 2007

Magneto-transport in single crystal Fe₃O₄/MgO/Co magnetic tunnel junctions

F. Greullet, E. Snoeck, C. Tiusan, F. Montaigne, G. Lengaigne, L. Calmels, B. Warot, M. Hehn
10th Joint MMM/Intermag Conference, Baltimore Maryland, USA, 7-11 January 2007

Transition ferromagnétique/superparamagnétique induite par oxydation

D. Lacour, M. Hehn, M. Alnot, F. Montaigne, F. Greullet, G. Lengaigne, O. Lenoble, S. Robert, C. Tiusan, B. Negulescu, A. Schuhl
11ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", Valpré Lyon, 14-16 mars 2007.

Oxydation contrôlée à l'interface Fe/MgO et transport dans les jonctions tunnel

Fe/MgO/Fe(001) épitaxiées

F. Bonnel, A.M. Bataille, A. Ben Hamida, S. Andrieu, C. Tiusan, F. Montaigne
11ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", Valpré Lyon, 14-16 mars 2007.

Transport tunnel polarisé en spin dans des jonctions tunnel magnétiques hybrides

monocristalline/polycristalline

F. Greullet, M. Hehn, C. Tiusan, D. Lacour, F. Montaigne, G. Lengaigne, E. Snoeck, M. Alnot, C. Bellouard
11ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", Valpré Lyon, 14-16 mars 2007.

Modification par implantation ionique du couplage d'échange dans des jonctions tunnel magnétiques épitaxiales Fe/MgO/Fe

E. Snoeck, P. Baules, G. Benassayag, C. Tiusan, F. Greullet, M. Hehn, A. Schuhl
11ème colloque Louis Néel "Couches minces et Nanostructures Magnétiques", Valpré Lyon, 14-16 mars 2007.

Spin polarized tunnelling in hybrid single crystal-polycrystalline magnetic tunnel junctions

F. Greullet, C. Tiusan, M. Hehn, F. Montaigne, G. Lengaigne, M. Alnot, C. Bellouard, D. Laccour
10th Joint MMM/Intermag Conference, Baltimore Marylands, USA, 7-11 January 2007.

Transport tunnel polarise en spin dans les jonctions tunnel épitaxies

C. Tiusan, F. Greullet, M. Sicot, M. Hehn, C. Bellouard, F. Montaigne, S. Andrieu, A. Schuhl
20èmes Journées Surfaces et Interfaces", JSI 2006, Marseille, 1-3 février, 2006.

INVITED PAPER

Spin filtering effects in single crystal Fe/MgO/Fe magnetic tunnel junctions

C. Tiusan, F. Greullet, M. Hehn, F. Montaigne, S. Andrieu
Innovative Mass Storage Technologies- European Phase Change Ovonic Science Minattec Crossroad 2006, May 29-31, 2006, Grenoble
INVITED PAPER

Spin polarized tunnel transport in magnetic tunnel junctions

C. Tiusan
Statistical Physics and Low Dimensional Systems, Workshop of Statistical Physics and Surface and Spectroscopy groups, LPM UHP, Nancy, 17-19 Mai 2006.
INVITED PAPER

Tunnel transport and symmetry filtering effects in single crystal tunnel junctions

F. Greullet, C. Tiusan, M. Hehn, F. Montaigne, S. Andrieu
Workshop N° 2 "Nanosciences & Nanotechnologies", University Henri Poincaré (Nancy, France) / June 8-9, 2006.

Spin filtering in Fe/MgO based magnetic tunnel junctions

F. Greullet, C. Tiusan, M. Hehn, F. Montaigne, C. Bellouard, A. Schuhl
INTERREG III-C Nancy, France - 8 June 2006.

Spin filtering effects in single crystal Fe/MgO/Fe magnetic tunnel junctions

C. Tiusan, M. Hehn, F. Montaigne, S. Andrieu, M. Sicot, J. Faure Vincent, F. Greullet, A. Schuhl
French-US Workshop on Spintronics, Saint Pierre de Chartreuse, France 12-14th June 2006

New trends in thin films : from spin electronics towards nanotechnology

C. Tiusan, Cluj-Napoca (Romania), Janvier (2005)

Invited conference

Electronique de Spin

Conférence InterReg III C « Etudier sans Murs », Nancy, France, 20 mai 2005

INVITED TALK

Spin filtering effects in monocrystalline Fe/MgO/Fe magnetic tunnel junctions

C. Tiusan, J. Faure-Vincent, M. Sicot, M. Hehn, C. Bellouard, F. Montaigne, S. Andrieu, A. Schuhl, *EMRS 2005 Spring Meeting, Strasbourg (France) : May 31 - June 3, 2005*

INVITED TALK

Effet de filtrage dans les junctions tunnel epitaxiées

M. Sicot, C. Tiusan, S. Andrieu, F. Montaigne, C. Bellouard, M. Hehn, A. Schuhl, F. Bertran, A. Fortuna, A. Tagliaferri, N. Brookes.

10eme colloque Louis Neel, 21-23 septembre 2005, Dourdan, France.

Jonctions tunnel magnétiques avec des barrières composites : caractéristiques tunnel asymétriques

C. De Buttet, M. Hehn, F. Montaigne, C. Tiusan, A. Schuhl, L. le Brizoual, P. Alnot, E. Snoeck, S. Zoll

10eme colloque Louis Neel, 21-23 septembre 2005, Dourdan, France.

Spin-filtering in epitaxial tunnel junctions

C. Tiusan, F. Greullet, M. Sicot, M. Hehn, C. Bellouard, F. Montaigne, S. Andrieu, A. Schuhl
50th Magnetism and Magnetic Materials Conference, San-Jose, October 30- November 3, 2005, California (USA).

On the quality of MBE grown Fe/MgO and Co/MgO (001) interfaces

M. Sicot, S. Andrieu, C. Tiusan, F. Bertran, F. Montaigne

50th Magnetism and Magnetic Materials Conference, San-Jose, October 30- November 3, 2005, California (USA).

Schottky barrier formation and its effect on a Si-based spin tunnel transistor

C. Denis, C. Tiusan, R.A. Ferreira, E. Hourdakakis, N. Zimmerman, A. Adler, A.P. Chen, W.E. Egelhoff, J.F. Gregg, G.J. Ensel, S.M. Thompson, P.P. Freitas.

50th Magnetism and Magnetic Materials Conference, San-Jose, October 30- November 3, 2005, California (USA).

Magnetoresistance versus electronic structure in epitaxial magnetic tunnel junctions

J. Faure-Vincent, C. Tiusan, C. Bellouard, M. Hehn, F. Montaigne, E. Jouguelet, A. Schuhl

The 9th Joint Magnetism and Magnetic Materials (MMM)/Intermag Conference, Anaheim, California, 5-9 January 2004.

Influence of barrier overoxidation and annealing on the inelastic spin-dependent tunneling in AlOx-based junctions

T. Dimopoulos, Y. Henry, V. Da Costa, C. Tiusan, and K. Ounadjela

Journal of Applied Physics, 95 (11), 6936, (2004).

The 9th Joint Magnetism and Magnetic Materials (MMM)/Intermag Conference, Anaheim, California, 5-9 January 2004.

Spin dependent tunnel transport in epitaxial junctions Fe/MgO/Fe

J. Faure-Vincent, C. Tiusan, E. Jouguelet, C. Bellouard, M. Hehn, A. Schuhl

Louis Néel Colloquium "Thin films and magnetic nanostructures", March 17-19 2004, Autrans, (France).

Artificial antiferromagnetic system based on spin polarised tunneling

C. Tiusan, J. Faure-Vincent, E. Jouguelet, C. Bellouard, M. Hehn, A. Schuhl

Colloquium Louis Néel "Thin films and magnetic nanostructures", March 17-19 2004, Autrans, (France).

MgO tunnel barrier grown by sputtering : experience and modelisation

G. Malinowski, M. Hehn, C. de Buttet, F. Montaigne, C. Tiusan, J. Faure-Vincent, A. Schuhl

Colloquium Louis Néel "Thin films and magnetic nanostructures", March 17-19 2004, Autrans, (France).

Systeme antiferromagnetique artificiel cree par effet tunnel

C. Tiusan, J. Faure-Vincent, E. Jouguelet, C. Bellouard, M. Hehn, E. Snoeck, A. Schuhl

Journées de la Matière Condensée (JMC9), 30 août- 3 septembre 2004, Nancy (France).

Transport tunnel polarise en spin dans le systeme hybride epitaxie Fe/MgO/Fe

J. Faure-Vincent, C. Tiusan, E. Jouguelet, C. Bellouard, M. Hehn, F. Montaigne
Journées de la Matière Condensée (JMC9), 30 août- 3 septembre 2004, Nancy (France).

Artificial antiferromagnetic systems based on spin polarized tunnelling

C. Tiusan, M. Hehn, J. Faure-Vincent, C. Bellouard, A. Schuhl
International Workshop on Exchange Biased Magnetic Nanostructures IWEBN'04, 16-18 septembre 2004, Anglet (France).

Magnetism and spin polarised transport in the epitaxial hybrid system Fe/MgO/Fe

J. Faure-Vincent, C. Tiusan, C. Bellouard, E. Jouguelet, F. Canet, M. Sajieddine, E. Popova, M. Hehn, F. Montaigne, A. Schuhl
Congress "Innovation in Elaboration and Applications of Thins Films", November 18-20 2003, Nancy, (France).

High magnetoresistive fully epitaxial magnetic tunnel junctions

J. Faure-Vincent, C. Tiusan, C. Bellouard, E. Jouguelet, M. Hehn, A. Schuhl
International Colloquium on Magnetic Films and Surfaces, July 22-25 2003, Madrid (Spain).

Epitaxial Magnetic Tunnel Junctions grown by Molecular Beam Epitaxy

J. Faure-Vincent, C. Tiusan, C. Bellouard, M. Hehn, F. Montaigne, E. Jouguelet, A. Schuhl
Magnetism of Nanostructured Systems and Hybrid Structures, Summer School, September 1-10 2003, Brasov (Romania).

Couplage d'échange par effet tunnel à travers une barrière isolante

J. Faure-Vincent, C. Tiusan, E. Snoeck, C. Bellouard, E. Popova, M. Hehn, F. Montaigne, A. Schuhl
Colloque Louis Neel 2002, "Couches Minces et Nanostructures Magnétiques", Gérardmer, France (24 au 26 septembre 2002).

Transport dans les jonctions tunnel a double barriere

A.Iovan, C.Tiusan, V. Da Costa, Y.Henry, M.Chshiev, K. Ounadjela, D. Stoeffler
Colloque Louis Neel 2002, "Couches Minces et Nanostructures Magnétiques", Gérardmer, France, (24 au 26 septembre 2002).

Structure et état de contrainte de jonctions tunnel épitaxiées Co/Fe/MgO/Fe/MgO(001) d'épaisseurs variables de la barrière d'oxyde

E. Snoeck, E. Popova, C. Bellouard, C. Tiusan, J. Faure-Vincent, A. Schuhl
Colloque Louis Neel 2002, "Couches Minces et Nanostructures Magnétiques", Gérardmer, France, (24-26 septembre 2002).

Antiferromagnetic coupling by spin polarized quantum tunneling

J. Faure-Vincent, C. Tiusan, C. Bellouard, E. Popova, M. Hehn, F. Montaigne, A. Schuhl
47th Annual Conference on Magnetism & Magnetic Materials, Tampa, Florida, (2002).

Magnetostatic interactions in artificial ferrimagnet based magnetic tunnel junctions

C. Tiusan, T. Dimopoulos, L. Buda, V. Da Costa, K. Ounadjela, M. Hehn, H. Van den Berg
8th Joint MMM Intermag Conference, San Antonio, Texas (2001).

Spin polarized tunneling as a probe for quantitative analysis of field dependent domain structure in magnetic tunnel junctions

C. Tiusan, M. Hehn, T. Dimopoulos, K. Ounadjela
8th Joint MMM Intermag Conference, San Antonio, Texas (2001).

Effet des interactions magnétostatiques dans les jonctions tunnel sur le transport tunnel polarisé

C. Tiusan, M. Hehn, T. Dimopoulos, V. da Costa et K. Ounadjela
7ième Colloque Louis Néel 'Couches Minces et Nanostructures Magnétiques', Dourdan, 8-9 Mars (2001).

Magnetic tunnel junctions : Prospects in Random Access Memory

C. Tiusan, K. Ounadjela
MINATEC, 1st European Workshop : Inovative Mass Storage Technologies, Grenoble (2001).

Invited talk

Local investigation of thin Al oxide barriers incorporated in magnetic tunnel junctions

T. Dimopoulos, V. da Costa, C. Tiusan, K. Ounadjela
Symposium on Metallic Multilayers, MML'01, Aachen, Germany, June (2001).

Control of the magnetostatic interactions in magnetic tunnel junctions with artificial antiferromagnets

T. Dimopoulos, C. Tiusan, Y. Henry, K. Ounadjela
Joint European Magnetic Symposia (JEM's 01), Grenoble (2001).

Double magnetic tunnel junctions: potential semiconductor-free bipolar switch for MRAMs

C. Tiusan, A. Iovan, M. Chshiev, V. Da Costa, D. Stoeffler, T. Dimopoulos, K. Ounadjela
46th Annual Conference on Magnetism and Magnetic Materials, Seattle, Washington, (2001).

Double tunnel barrier structures as a tool for investigating fundamental aspects of spin polarized transport

C. Tiusan, A. Iovan, V. da Costa, T. Dimopoulos, M. Chshiev, D. Stoeffler, K. Ounadjela
Symposium on Metallic Multilayers, MML'01, Aachen, Germany, June (2001).

Local investigation of thin insulating barriers incorporated in magnetic tunnel junctions

T. Dimopoulos, V. Da Costa, C. Tiusan, K. Ounadjela, H. Van Den Berg
8th Joint MMM-Intermag Conference, San Antonio, Texas (2001).

Relation entre transport polarisé et magnétisme

C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn, H.A.M. van den Berg, V. da Costa, Y. Henry
Journée thématique IPCMS Strasbourg: Nanostructures Magnétiques, 8 mars (2000).

Spin polarized tunneling as a probe for quantitative analysis of field dependent domain structure in magnetic tunnel junctions

C. Tiusan, M. Hehn, T. Dimopoulos, K. Ounadjela
The 8th Joint MMM-Intermag Conference, San-Antonio, Texas, January 7-11, (2000).

Magnetostatic interactions in artificial ferrimagnet based magnetic tunnel junctions

C. Tiusan, M. Hehn, T. Dimopoulos, L. Buda, V. Da Costa, K. Ounadjela, H.A.M. van den Berg
The 8th Joint MMM-Intermag Conference, San-Antonio, Texas, January 7-11, (2000).

Local investigation of thin insulating barriers incorporated in tunnel junctions

T. Dimopoulos, V. Da Costa, C. Tiusan and K. Ounadjela, H. A. M. van den Berg
The 8th Joint MMM-Intermag Conference, San-Antonio, Texas, January 7-11, (2000).

Magnétisme et transport polarisé en spin dans les jonctions tunnel magnétiques. Utilisation du transport tunnel comme une sonde micromagnétique

C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn, H.A.M. van den Berg, V. da Costa
Réunion du Groupement De Recherches POMMES, Abbaye des Prémontrés, Pont à Mousson, 4-5 décembre (2000).

Interfaces métal-oxyde : les jonctions magnétiques à effet tunnel comme systèmes modèles

V. Da Costa, C. Tiusan, T. Dimopoulos, K. Ounadjela
Réunion du Groupement De Recherches POMMES, Abbaye des Prémontrés, Pont à Mousson, 4-5 décembre (2000).

Enhanced thermal stability of magnetic tunnel junctions employing artificial antiferromagnets and Al oxide barriers

T. Dimopoulos, C. Tiusan, V. da Costa, K. Ounadjela, H. A. M. van den Berg
Réunion du Groupement De Recherches POMMES, Abbaye des Prémontrés, Pont à Mousson, 4-5 décembre (2000).

Domain structure duplication in Al₂O₃ Tunnel Junctions

M. Hehn, O. Lenoble, D. Lacour, A. Schuhl, C. Tiusan and K. Ounadjela
Symposium on Spin Electronics, Halle, Germany, 3-6 July (2000).

Structures en domaines et transport dépendant du spin dans les jonctions tunnel magnétiques

C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn, H.A.M. van den Berg, Y. Henry, V. da Costa
6ème Colloque Louis Néel 'Couches Minces et Nanostructures Magnétiques', Dieppe, 3-5 juin (1999).

Tunnel magnetoresistance versus micromagnetism in magnetic tunnel junctions

C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn, H.A.M. van den Berg, V. da Costa, Y. Henry
44th Annual Conference on Magnetism and Magnetic Materials, San-Jose, California, 15-18 Novembre (1999).

Enhanced robustness and tunnel magnetoresistance in artificial ferrimagnet based tunnel Junctions.

T. Dimopoulos, C. Tiusan, K. Ounadjela, M. Hehn, H.A.M. van den Berg, Y. Henry, V. da Costa
44th Annual Conference on Magnetism and Magnetic Materials, San-Jose, California, 15-18 Novembre (1999).

Domain structure and spin dependent transport in magnetic tunnel junctions.

C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn, H.A.M. van den Berg, V. da Costa, Y. Henry,
Ecole 'Magnéto-électronique de spin', Rhodes, 12-18 septembre (1999).

Transport polarisé en spin dans les jonctions tunnel utilisant le système Antiferromagnétique Artificiel

C. Tiusan, T. Dimopoulos, K. Ounadjela, M. Hehn, H.A.M. van den Berg, V. da Costa, Y. Henry,
Ecole 'Magnéto-électronique de spin', Aussois, 3-8 janvier (1999).

Jonctions Magnétiques à effet Tunnel à base du système antiferromagnétique artificiel (AAF)

C. Tiusan, M. Hehn, K. Ounadjela, Y. Henry,
Réunion GDR POMMES, Gif-sur-Yvette, 7-8 décembre (1998).

Electronic and magnetic structure of a N monolayer on Cr(001)

C. Tiusan, G. Moraitis, N. Kulikov, C. Demangeat
5th International Conference on the Structure of Surfaces, Aix en Provence (1996).

Computer modelling of K-XANES for supported Ni catalysts

N. Aldea, C. Tiusan, A. Chezan,
Proceedings at the 6th Conference on Physics Computing, Lugano, Suisse, (1996).

**A New Approach Used to Evaluate the Crystalline Size of Supported Metal Catalysts
by Single X-Ray Profile Fourier Transform Implemented on Maple V**

N. Aldea, C. Tiusan and R. Zapotinschi,
Proceedings of 8th Joint EPS-APS International Conference on Physics Computing, Krakow, Pologne, (1996).

The autonomy and visibility of the scientific activity : Fundraising by research projects:

Project/Contract	Position	Period
European Project ' NanoMEM ' IST – 1999 - 13471 <i>Semi-conductor free nanoscale non-volatile electronics and memories based on magnetic tunnel junctions</i> , Industrial partners: THALES (DE), SIEMENS (FR).	Member of PI team	2000-2003
' BLUEBERRIES ' Project MEDEA+ (<i>Building-up Embedded Memories</i>). Industrial partners: Motorola (CH, USA), Philips (NL), ST Microelectronics (FR), YogiTech, IMEC (BE)	Member of PI team	2003-2007
Young Scientist BQR project funded by Henri Poincare University, Nancy, FR <i>Study of electronic transport properties for low dimensionality magnetic systems</i> Total amount: 40 000 Euros	Project coordinator	2004
International Collaboration Convention between the Henri Poincaré University, Nancy (FR) and the Technical University Cluj-Napoca	French project coordinator	2004
French National Agency of Research (ANR) Project PNANO: ' CTS Lor-AI ', <i>Mise en réseau des centrales de technologies spécifiques de la région Lorraine – Alsace</i> Total amount: approx. 400 000 Euros.	Member of PI team	2005-2008
Integrated Action Project Hubert-Currien France-Espagne PICASSO, " <i>Hybrid epitaxial magnetic tunnel junctions: synthesis, magnetotransport and low frequency noise</i> " Total amount: approx. 50 000 Euros	Project coordinator (France) PI	2007-2009
French National Agency of Research (ANR) " <i>Spintronics of Epitaxial Magnetic Tunnel Junctions</i> " SPINCHAT ANR- 07-BLAN-341 Total amount: approx. 400 000 Euros funding, (total cost approx. 2 360 000 Euros)	Project Coordinator PI	2007-2010
Integrated Action Project Hubert-Currien France-Espagne PICASSO, " <i>Fully epitaxial magnetic tunnel junctions with nanoscale engineered interfaces: magnetization dynamics, transport, noise</i> " Total amount: approx. 50 000 Euros	Project coordinator (France) PI	2009-2011
POS CCE Project: ID. 574, cod SMIS-CSNR 12467, <i>Research and development of mesoscopic size spintronic devices-</i> SPINTRONIC, Priority axis 2 – Research, Technological Development and Innovation for Competitiveness; Operation 2.1.2: „ <i>Complex research projects fostering the participation of high-level international experts</i> " Total amount: approx. 1 000 000 Euros.	Project coordinator	2010-2013
Contract PNII - Exploratory Ideas- nr. 23/29.08.2013 <i>Mesoscopic SPINtronic devices with TAILored magneto-transport properties "SPINTAIL"</i> Total amount: approx. 280 000 Euros.	Project coordinator	2013-2016

Coriolan TIUSAN

12-21-2015