



**3rd INTERNATIONAL CONFERENCE
OF THE AFRICAN MATERIALS RESEARCH SOCIETY
University Hassan II Mohammedia,
Faculty of Sciences Ben M'Sik - Casablanca- Morocco
7-10 December 2005, Marrakech, Morocco
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Casablanca, November 13, 2005

LIST OF SPEAKERS

AFRICA

ALGERIA

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M Abed

Department of Civil Engineering, University of Blida, Algeria

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H. Rozale and B. Bouhafs

Modelling and Simulation in Materials Science Laboratory, Physics Department, University of Sidi Bel-Abbes, 22000 Sidi Bel-Abbes, Algeria

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M. Bournane^a, Y. Sadaoui^b & M. Nedjar^a

^aLaboratoire de Matériaux, d'Electrochimie et de Corrosion, Université Mouloud Mammeri de Tizi Ouzou, Algeria

^bDépartement de Physique, Université Mouloud Mammeri de Tizi Ouzou, Algeria

Glass-Formation In Fluoroindate Glasses

Ahmed BOUTARFAIA^a & Marcel POULAIN^b

^a Département de Chimie, Université de Biskra, B.P. 145, RP-Biskra, Algérie

^b Laboratoire des Matériaux Photoniques, Université de Rennes I, Rennes, France

ACTIVATION ENERGIE FOR DC CONDUCTIVITY IN DEHYDRATED ALKALI METAL-EXCHANGED MONTMORILLONITES

A. Haouzi¹, **M. Kharroubi**²

²Centre Universitaire de Djelfa BP 3117 Ain Chih Djelfa 17000.

¹Université de Tiaret, Laboratoire de Synthèse et Catalyse, BP 78 14000 Tiaret,

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Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.

, Web site: www.africamsconf3.univ.maafricamsconf3@yahoo.fr Phone: +212 63296431 Fax : +212 22704675 Email:

L. Mahdjoubi^a, T. Mohammed-Brahim^b, F. Le Bihan^b
^a LESIMS, Université B.M. de Annaba, BP12 Annaba, Algeria.

^b GM-IETR, Université RENNES I, 35042 Rennes Cedex, France.

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Said KENAI* and Mouloud ABDESSEMED
Geometrials Laboratory, University of Blida, Algeria

BOTSWANA

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A. R. AKANDE

Department of Physics, University of Botswana, Private Bag 0022, Gaborone, Botswana.

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T.S.Sathiaraj

Department of Physics, University of Botswana, P.Bag 0022, Gaborone, Botswana

CAMEROUN

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Emmanuel NGAMENI^a, Ignas K. TONLE^b, Rose. B. BOUWE^a

^a Département de Chimie Inorganique, Laboratoire de Chimie Analytique
Université de Yaoundé I, B. P. 812 Yaoundé - Cameroun

^b Département de Chimie, Université de Dschang, B.P. 67 Dschang – Cameroun

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J.P. Nguetnkam^{a, c}, R. Kamga^b, F.Villieras^c, G.E. Ekodeck^d, J.Yvon^c

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^a Département des Sciences de la Terre, Université de Ngaoundéré, Cameroun
^b Département de chimie Appliquée, ENSAI, Université de Ngaoundéré, Cameroun
^c Laboratoire Environnement et Minéralurgie, ENSG-INPL, Nancy, France
^d Département des Sciences de la Terre, Université de Yaoundé I, Cameroun

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D. Fotio, **P. Signing**, D. Njopwouo

Laboratoire de Physico-Chimie des Matériaux Minéraux, Faculté des Sciences, Université de
Yaoundé I, Yaoundé, Cameroun

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L. K. TONLE^a, A. T. JIEUMBOUE^b, J. T. APHOKENG^b & E. NGAMENI^b

^a Département de Chimie, Université de Dschang, B.P. 67 Dschang, Cameroun
^b Département de Chimie Inorganique, Laboratoire de Chimie Analytique
Université de Yaoundé I, B. P. 812 Yaoundé Cameroun

EGYPT

BUILDING MATERIAL SCIENCE FOR ENGINEERING

H.Y.Ghorab

Department of Chemistry, Faculty of Science, Helwan University, Cairo, Egypt

On 193 nm photolysis of acetone

M. A. Mahmoud^(a), and Y. Badr^(b)

(a) Chemistry Dept., Faculty of Science, Zagazig University, Zagazig, Egypt.

(b) National Institute of Laser Enhanced Science, Cairo University, Cairo, Egypt.

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LESOTHO

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N. Manyala^a & J. F. DiTusa^b

^a Department of Physics and Electronics, National University of Lesotho, P.O. Roma 180,
LESOTHO

^b Department of Physics and Astronomy, Louisiana State University, Baton Rouge, LA 70803

LIBYA

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T.K. Aboud

Dept. of Mats. & Metall. Engineering, Al-Fateh University, Tripoli-Libya
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S.K.Shakshooki, R.S. Abudalal and F.M.Turki

Department of Chemistry, El-Fateh University, P.O.Box 13203 Tripoli, Libyan Arab
shakshooki2002@yahoo.comJamahiryia. E-mail:

MOROCCO

**Simultaneous determination of lead and cadmium using chemical sensor based on mercury
or bismuth film electrode coated with fibrinogen**

M. El Rhazi^a, I. Adraoui^b, A. Amine^b

^aLaboratoire d'électrochimie et de chimie physique

^bLaboratoires des Analyses chimiques et Biocapteurs

Faculté des Sciences et Techniques, Université Hassan II Mohammedia, BP 146, Mohammedia
Maroc

Growth of vertically correlated GaN QDs

M. Benaissa^{*}, P. Vennéguès[§], F. Semond[§], J. Massies[§]

^{*} CNRST, 52 Bd Omar Ibn Khattab, B.P. 8027, Agdal, 10102 Rabat, Morocco
benaissa@cnr.ac.ma

[§] CRHEA-CNRS, rue Bernard Grégory, 06560 Valbonne, France

ORGANIZATION OF NANOPARTICLES NEAR A FLUCTUATING MEMBRANE

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M. Benhamou, H. Kaïdi, A. Bendouch^a & T. Bickel^b

^a Laboratoire de Physique des Polymères et Phénomènes Critiques
Faculté des Sciences Ben M'sik, Université Hassan II-Mohammedia
P.B. 7955, Sidi Othman, Casablanca, Morocco

^b Centre de Physique Moléculaire Optique et Hertzienne,
Université Bordeaux 1, UMR 5798
351 cours de la Libération, 33405 Talence, France

NATURAL CLAYS FOR USE IN AIR POLLUTION CONTROL

T Chafik^a, G Cifredo^b, JM Gatica^b, S Harti^a & H Vidal^b

^a Laboratoire des Procédés et Matériaux de Dépollutions
Faculté des Sciences et Techniques de Tanger,
Université Abdelmalek Essaadi, BP 416 Tanger Maroc

^b Departamento de Ciencia de los Materiales e Ingeniería Metalúrgica y Química Inorgánica,
Facultad de Ciencias, Universidad de Cádiz, 11510 Puerto Real, Spain

ADSORPTION ONTO THE INERT BIOMATERIALS : APPLICATION FOR WASTE WATER TREATMENT

Mohamed CHIBAN¹, Hassan BENHIMA¹, Fouad SINAN^{1*}, Patrick SETA²

1: Chemistry Department, Faculty of Science, BP. 8106/S. Agadir, Morocco.

2: IEMM, UMR CRNS n° 5635, 1919 Road of Mende, 34293 - Montpellier Cedex 5, France.

* To whom correspondence should be sent: Tel : +21248220957, Fax : +21248220100

* E-mail fouadsinan@yahoo.fr

ROOM TEMPERATURE PHOTOTLUMINESCENCE, ELECTROLUMINESCENCE AND INFRARED SPECTROSCOPY, THREE TECHNIQS FOR MATERIAL AND ELECTRONIC COMPOUND CHARACTERIZATION.

Ali AHAITOUF

Sidi Mohammed Ben Abdallah University, Faculty of sciences and Technics

Electrical engineering Depatement; P.O. Bow: 2202 Fès-Morocco

PROPERTIES OF ITO AND FTO THIN FILMS PREPARED BY SPRAY PYROLYSIS

^A M. AIT AOUAJ, AND ^A **M. ABD-LEFDIL**
^B R. DIAZ AND ^B F. RUEDA

LABORATOIRE DE PHYSIQUE DES MATERIAUX, ^AFACULTE DES SCIENCES B.P. 1014 RABAT- MAROC

^BDEPARTAMENTO DE FISICA APLICADA C-XII, UNIVERSIDAD AUTONOMA DE MADRID, MADRID- SPAIN

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**Effect of heat treatment on structure, critical temperature and irreversibility line in HTCS
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B. Bouallal, **A. Nafidi***, A. El kaaouachi and M. Bellioua

Condensed Matter Physics Laboratory, Faculty of Sciences, B.P 8106 Hay Dakhla,
University Ibn Zohr, 80000 Agadir, Morocco

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A.J. Rusi El Hassani, Applied Physics Laboratory, Physics Department, Abdelmalek Essaadi
University, Tanger, Morocco

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I. Zorkani and **A. Didi Seddik**

Groupe de photoélectronique, LPS, Département de Physique, Faculté des sciences Dhar Mehraz,
B.P. 1796-Fez-Morocco

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M. Zouine^{1,*}, **R. Páramo²** and **C. Casanova²**

¹ Dpt. des Sciences de Base, Ecole National d'Agriculture, Meknès, Maroc

² Dpt. Termodinámica y Física Aplicada, Universidad de Valladolid, 47005 Valladolid, Spain. *

To whom correspondence should be addressed. E-mail: mZOUINE@caramail.com

Morocco's Action plan inside the frame of the MWN

Khalid Riffi Tamsamani

Department of Higher Education, Training and Scientific Research. Morocco

NIGERIA

NEW ADVANCED MATERIALS DEVELOPMENT EFFORTS IN NIGERIA.

Babaniyi BABATOPE and **Olusegun O. ADEWOYE¹**

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Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.

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Director and Chief Executive,
Engineering Materials Development Institute (EMDI),
Km. 4, Akure-Ondo Road,
P. M. B. 611. Akure. Nigeria.

**EFFECT OF THERMAL ANNEALING ON THE BAND GAP AND OPTICAL
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F.I. Ezema

Department of Physics & Astronomy, University of Nigeria, Nsukka, Nigeria
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A. Y. Fasasi^a, D. Knoessen^b, U. Buttner^c, Ch. Theron^d, M. Maaza^d

- ^{a)} Centre for Energy Research & Development, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria
^{b)} Department of Physics, University of Western Cape, Private Bag X1001, Kwadlangezwa 3886, South Africa.
^{c)} Department of Electrical Engineering, Stellenbosch University, Western Cape, South Africa.
^{d)} Nano-Sciences Laboratories, Materials Research Group, iThemba LABS, national Research Foundation, P. O. Box 722, Somerset West 7129, South Africa.

Uganda

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K.S Obwoya^b

Department of Physics, Kyambogo University, Kampala-Uganda

SENEGAL

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B. D. Ngom^(a, b), T. Mpahane^(b), A. C. Beye^(a), D. Knoessen^(c), Ch. Theron^(b), N. Cingo^(d), M. Maaza^(b)

- (a): Groupes de Laboratoires de physique des Solides et Sciences des Matériaux, Faculté des sciences et Techniques Université Cheikh Anta Diop de Dakar (UCAD)
B.P. 25114 dakar-Fann Dakar (Senegal),
(b): NANO-Sciences Laboratories, Materials Research Group, iThemba LABS, National Research Foundation, South Africa,
(c): Department of Physics, University of Western Cape, South Africa,
(d): Department of Chemistry, UNISA, Pretoria, South

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^(a) **K.J. Dangbégnon**, ^(a) A.C. Bèye, ^(b) C. Weichsel, ^(b) K. T.Roro, ^(b) J. R. Botha, ^(b) A. Venter
and ^(b) A.W.R. Leitch

^(a) Université Cheikh Anta Diop de Dakar (Sénégal)
Department of Physics,
^(b) NelsonMandela Metropolitan University,
P.O. Box 77000, Port Elizabeth 6031, South Africa

SOUTH AFRICA

The Properties of Gold Nanosystems:

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L Ackermann, MA Maladisa, PE Ngoepe

Materials Modelling Centre, School of Physical and Mineral Sciences,
University of Limpopo, Sovenga 0727, RSA.

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Y Ballim & PC Graham

School of Civil & Environmental Engineering, University of the Witwatersrand, Johannesburg,
South Africa

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J. R. Botha, L. Botha, T. R. Baisitse, J.A.A. Engelbrecht and A. W. R. Leitch

Department of Physics, Nelson Mandela Metropolitan University,
Port Elizabeth, South Africa

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J Boeyens

University of Pretoria, South Africa

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Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.

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DEFECT PRODUCTION IN IRRADIATED ALKALI IODIDES STUDIED BY OPTICAL SPECTROSCOPY

GO Amolo^{a,b}, RM Erasmus^{a,b}, JD Comins^{a,b} & TE Derry^b

^a Materials Physics Research Institute, University of the Witwatersrand, Johannesburg, South Africa

^b School of Physics, University of the Witwatersrand, Johannesburg, South Africa
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D De Waal

Department of Chemistry, University of Pretoria, 0002 Pretoria, South Africa

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A. G. Every

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**E. Sideras-Haddad^a, T. Schenkel^b, A. Persaud^b, Dieter H. Schneider^c
S. Shrivastava^a and D.B. Rebuli^a**

^aSchool of Physics, University of the Witwatersrand, PO Box Wits, Johannesburg, 2050 South Africa

^bE. O. Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA

^cLawrence Livermore National Laboratory, University of California, Livermore, California 94551, USA

ZnO MATERIALS-RELATED RESEARCH AT THE NMMU, SOUTH AFRICA

AWR Leitch, KT Roro, GR James, C Weichsel, PR Berndt, A Venter, JR Botha

Department of Physics, Nelson Mandela Metropolitan University,
P.O. Box 77000, Port Elizabeth 6031, South Africa

Nanotechnologies in Africa

**M.Maaza^(a), A.C.Beye^(b), T.Otiti^(c), N. Manyala^(d), I.Zorkani^(e), S.Sathiaraj^(f), J.M.Ndjaka^(g),
K.Chinyama^(h), A. Varkey⁽ⁱ⁾, F. Kavishe^(j) & R. Kivaisi^(k)**

^(a):Nanosciences Labs, MRG, iThemba LABS, N.R.F., SOUTH-AFRICA,

^(b):Groupe de Physique des Solides, Univ. Cheikh Anta-Diop, SENEGAL,

^(c):Dept. Of Physics, Kampala University, Kampala, UGANDA,

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- (d):Dept. Of Physics, National University of Lesotho, Maseru, LESOTHO,
 (e):Dept. of Physics, Dar El Mehrez University, Fez, MOROCCO,
 (f):Dept. of Physics, University of Botswana, Gaborone, BOTSWANA,
 (g): Faculty of Sciences, University of Yaounde, Yaounde, CAMEROON,
 (h):Dept. of Physics, National University of Zambia, Lusaka, ZAMBIA,
 (i):Dept. of Physics, Royal University of Swaziland, Kwaluseni, SWAZILAND,
 (j):Faculty of Engineering, University of Namibia, Windhoek, NAMIBIA,
 (k):Faculty of Sciences, Dar Essalam University, Dar Essalam, TANZANIA,

HIGH TEMPERATURE SURFACE BRILLOUIN SCATTERING STUDIES OF AN AMORPHOUS BORON CARBIDE (B₄C₃) FILM

BA Mathe^a, JD Comins^a, AG Every^b, T Wittkowski^c

^a DST/NRF Centre of Excellence in Strong Materials, University of the Witwatersrand, Johannesburg, South Africa

^b School of Physics, University of the Witwatersrand, Johannesburg, South Africa

^c Fachbereich Physik, Universität Kaiserslautern, Germany

RAMAN STUDY OF THE SUPERIONIC BEHAVIOUR OF LANTHANIDE-DOPED FLUORITE CRYSTALS

M Mujaji & J D Comins

Materials Physics Research Institute, School of Physics, University of the Witwatersrand, Johannesburg, South Africa

INDENTATION STUDIES IN HOMOGENOUS AND INHOMOGENOUS MATERIALS

F.R.N. Nabarro^a, S. Shrivastava^a and S. Luyckx^b

^a School of Physics

^b School of Chemical and Metallurgical Engineering,

DST/NRF Center of Excellence in Strong Materials,

University of the Witwatersrand, Private Bag 3, WITS 2050, Johannesburg, South Africa

TRIBOLOGY AS AN IMPORTANT & AFFORDABLE FIELD OF RESEARCH FOR AFRICA: A CASE STUDY

N. Sacks^a, T.A. Mokgalagadi^{a,b} and S. Luyckx^a

^aSchool of Chemical and Metallurgical Engineering, DST/NRF Center of Excellence in Strong Materials,

University of the Witwatersrand, South Africa

^bSouth African Civil Aviation Authority

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AMERICA

USA

Advanced high power batteries with improved life and safety for HEV Applications

K. Amine, J. Liu, I. Belharouak, and S.-H. Kang
Argonne National Laboratory, 9700 South Cass Ave.,
Argonne, IL 60439, USA
MATERIALS FOR SOLID STATE LIGHTING

Anthony K. Cheetham, Neeraj Sharma, Ronan Le Toquin and Gautam Gundiah

International Center for Materials Research, University of California, Santa Barbara, CA 93106,
USA

MATERIALS WORLD NETWORK: AFRICA's ROLE

Adriaan de Graaf

Directorate for Mathematical and Physical Sciences
US National Science Foundation
42101 Wilson Boulevard, # 1005, Arlington, VA 22230, USA

SYNTHESIS AND CHARACTERIZATION OF NEW CHALCOGENIDE MATERIALS FOR HEAVY METAL REMEDIATION

P. K. Dorhout

Department of Chemistry, Colorado State University, Fort Collins, Colorado 80523 USA.

Building Block Approach to the Design and Synthesis of Zeolite-net-like Metal-Organic Frameworks (ZMOFs) with extra-large cavities.

Mohamed Eddaoudi, Yunling Liu, Victor Kravtsov, Ryan Luebke, Randy Larsen.

Department of Chemistry, University of South Florida, Tampa, Florida

A Unique Class of Hybrid Semiconductors: Periodic Nanostructures with Systematic Tunability

Jing Li

Department of Chemistry and Chemical Biology
Rutgers University, Piscataway, NJ 08854

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Patterning Elastically Stretchable Interconnects for Flexible Displays

Joyelle Jones, S. P. Lacour and Sigurd Wagner

Princeton Institute of Science and Technology of Materials

And

Department of Electrical Engineering

**Princeton University
Princeton, NJ 08544**

**SELF-LEARNING KINETIC MONTE CARLO SIMULATIONS OF THIN FILM
GROWTH**

Abdelkader Kara

Kansas State University

Directed Assembly of Cluster-based Inorganic-Organic Hybrid Materials

Abdessadek Lachgar and Andrew Zhou

Department of Chemistry, Wake Forest University, Winston-Salem, USA

**THERMAL STRESS ANALYSIS COMPARISONS OF APS, EBPVD, AND DVC
THERMAL BARRIER COATINGS**

P. Mensah, N. Uppu, R. Diwan, and S. Ibekwe

Department of Mechanical Engineering, Southern University, Baton Rouge, LA , USA

**VIA THE GEL-SOL PROCESS: SHAPE MODIFICATION BY
IN-SITU-GENERATED SULFATE IONS**

Qingyuan Liu and **Kwadwo Osseo-Asare** (asare@ems.psu.edu)

Department of Materials Science and Engineering, Penn State University
University Park, PA 16802, USA

NEW BULK AND NANO MAGNETIC MATERIALS

R. Seshadri

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Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.

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Materials Department, University of California, Santa Barbara, CA 93106, USA

The U.S./Africa Materials Institute: Overview of Recent Research and Education Activities

Wole Soboyejo

Princeton Institute of Science and Technology of Materials

And

Department of Mechanical and Aerospace Engineering

Princeton University Princeton, NJ 08544

Computational Nanoscience: the basis for designing functional materials atom by atom

Talat S Rahman

Kansas State University

Metal-Organic Frameworks for Gas Storage

Omar M. Yaghi

Department of Chemistry, University of Michigan, Ann Arbor, MI 48109, USA
**MECHANISM OF AGING OF ELECTRODE MATERIALS FOR LITHIUM ION
BATTERIES**

R. Yazami and Y. Ozawa

The CNRS-CALTECH International Laboratory
California Institute of Technology. MC 138-78
Pasadena, CA 91125, USA

JAMAICA

**Development of Polypyridyl-like Molecular Sensors for Environmental & Biological
Applications**

Mohammed Bakir, Department of Chemistry, University of The West Indies-Mona
Campus, Kingston 7, Jamaica, W.I.

ASIA

KUWAIT

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Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.

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NON-DESTRUCTIVE EVALUATION OF MATERIALS IN CORROSIVE ENVIRONMENTS

K.Habib

Materials Science Laboratory, Department of Advanced Systems, KISR,
P. O. Box 24 885 SAFAT, 13109 Kuwait

OMAN

RHEED AND XPS STUDIES OF EPITAXIAL CO THIN FILM ON GAAS (100), (111)A, AND (111)B

Salahaddin Al-Saadi, Faramarz S. Gard*, Zakia Al-Bousaidi, Salim Al-Harthy
Department of Physics, College of Science, Sultan Qaboos University
P.O. Box 36, Postal Code 123 Al-Khodh, Sultanate of Oman

EUROPE

BELGIUM

Dewetting on cylindrical solid-fluid interface : big push pinning evaporation

Léonard Kabeya-Mukeba Yakasham^{1,3}, Mohamed Assou² A.R. Kabongo Mulamba¹,
C. Mulenga Mbombo¹, Kitsisa Khonde¹ Zazoui Mimoun², S.Dorbolo³, and N.
Vandewalle³

¹ ESU-BEPUCO, Ista-Kin & Unikin B.P. 6534 Kinshasa 31 Ndolo, RD Congo, E-mail : l_y_m_kabeya@hotmail.com

²UFR Matériaux en couches minces et système pour la conversion photovoltaïque
F.S.T. Mohammedia B. P. 146, Maroc

³ GRASP, Institut de Physique, Bât. 5a, University of Liège, 4000 Liège, Belgium

FRANCE

Process of estimate applied to optical flow for the pursuit of target.

Abdelouahad Amansou, Alain Faure & Olga Cachard

G.R.E.A.H. Université du Havre
25, rue Philippe Lebon, BP 540, 76058 Le Havre, France

CALCULATION OF GIANT MAGNETOCALORIC EFFECT IN THE TRANSITION METALS BASED COMPOUNDS

M. Balli^a, D. Fruchart^{a,b}, E.K. Hlil^a, S. Miraglia^a, P. de Rango^{a,b},
P. Wolfers^a, D.Gignoux^c,
F. Allab^d, A. Lebouc^d, J.M. Fournier^d and J.P. Yonnet^d

^aLaboratoire de Cristallographie, CNRS, BP 166, 38042 Grenoble Cedex 9, France

^bCRETA, CNRS, BP 166, 38042 Grenoble Cedex 9, France

^cLaboratoire L. Néel, CNRS, BP 166, 38042 Grenoble Cedex 9, France

^dLEG, INPG/UJF, BP 46, 38402 Saint Martin d'Hères Cedex, France

Partick BATAIL

Conference secretary: 3rd Africa-MRS Conference (Prof. Abdelaziz El Jazouli)
Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.
, Web site: africamrsconf3@yahoo.fr Phone: +212 63296431 Fax : +212 22704675 Email:
www.africamrsconf3.univ.ma

Laboratoire Chimie, Ingénierie Moléculaire et Matériaux d'Angers
UMR 6200 CNRS-Université d'Angers, Bâtiment K - UFR Sciences
2, Boulevard Lavoisier, 49045 ANGERS, France

POROUS MATERIALS USED AS "STACKS" IN THERMOACOUSTIC ENGINE

Michel Bruneau, Gaëlle Poignant, Guillaume Penelet, Pierrick Lotton, Vitaly Gusev,
Etienne Gaviot, Lionel Camberlein

Laboratoire d'Acoustique de l'Université du Maine (LAUM UMR-CNRS 6613),
Université du Maine, 72 085 Le Mans cedex 9, France

FE modelling the attenuation of ultrasonic torsional wave modes for pipes testing.

Michel Castaings, Christophe Bacon

Laboratoire de Mécanique Physique, Université Bordeaux 1, UMR CNRS 5469, 351
cours de la Libération, 33405 Talence, FRANCE

GENERATION OF VERY HIGH PRESSURE PULSES AT THE SURFACE OF PIEZO-COMPOSITE MATERIALS USING ELECTRICAL PRE-STRESS: APPLICATION TO THE DEVELOPMENT OF A COMPACT SELF FOCUSING PIEZOELECTRIC LITHOTRIPTOR

D. Cathignol and A. Birer

INSERM - Unit 556, 151 Cours Albert Thomas, 69424 Lyon Cedex 03, France

SOUND WAVES PROPAGATION IN RIGID FRACTAL POROUS MEDIA SATURATED BY A VISCOUS FLUID

C. Depollier^a, Z.E.A Fellah^b & M. Fellah^c

^a Laboratoire de l'Université du Maine Le Mans France

^b Laboratoire de Mécanique et d'Acoustique Marseille France

^c Laboratoire de Physique Théorique USTHB Alger Algérie

Elaboration et caractérisation de matériaux hybrides nanostructurés

DUPIN Jean-Charles^a & GONBEAU Danièle^a

^a Laboratoire de Chimie théorique et Physico Chimie Moléculaire
Université de Pau et des Pays de l'Adour
Hélioparc, 2 Avenue du président Angot, 64053 Pau Cedex 9 - FRANCE

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www.africamsconf3.univ.ma

NANO-TOPOGRAPHY AND TRANSPORT PROPERTIES OF NICKEL ELECTRODEPOSITS ON ITO SUBSTRATE

Jean Ebothé and Lény Nzoghe-Mendome

LMEN, E.A. n°3799, Université de Reims, UFR Sciences, B.P.138,
21, rue Clément Ader, 51685 Reims cedex 02, France

EXPERIMENTAL AND NUMERICAL STUDIES ON GUIDED WAVES IN ELASTIC PLATES OF VARYING THICKNESSES.

M. Ech-Cherif El-Kettani^a, P. Marical^a, M. V. Predoi^b

^a Laboratoire d'Acoustique Ultrasonore et d'Electronique (LAUE), UMR CNRS 6068, Université du Havre, Le Havre, France.

^b Department of Mechanics, University POLITECHNICA of Bucharest, Bucharest, Roumanie.

Construction of organic/inorganic hybrid architectures via weak interactions

Abdelkrim EL-GHAYOURY, Anupama RANGANATHAN, Patrick BATAIL

CREEP RUPTURE IN HETERONEOUS MATERIALS : LISTEN AND PREDICT?

R. El Guerjouma^{a,b}, H. Nechad^b, A. Helmstetter^c, D. Sornette^{d,e}

^a LAUM UMR CNRS 6613, Université du Maine, Le Mans, France

^b GEMPPM UMR CNRS 5510, INSA de Lyon, Lyon, France

^c Lamont–Doherty earth observatory, Columbia University, New York , USA.

^d LPMC CNRS UMR CNRS 6622, University of Nice, Nice, France

^e IGPP, University of California, Los Angeles, , USA

ACOUSTICAL WAVEGUIDING IN A FGM PIPE

L. Elmaimouni, J.E. Lefebvre, V. Zhang, T. Gryba
IEMN-DOAE, Université de Valenciennes France

Guided waves attenuation caused by viscous deposits on the pipes wall

Mustapha El Moussaoui^a, Farid Chati^a, Fernand Léon^a, Aleksander Klauson^b &
Gérard Maz^a

STRUCTURAL AND MAGNETIC PROPERTIES OF FILMS ELABORATED BY PLASMA BASED ION IMPLANTATION

A. Chaise^a, C. Comminges^b, A. Besse^b, S. Béchu^b, J. Sirou^b, S. Miraglia^a, L.
Ortega^a, P. Wolfers^a, E.K. Hlil^a, **F. Fettaï**^a, D. Fruchart^a, A. Lacoste^b, J. Pelletier

On computational aspects of interfaces in masonries

Fazia FOUCHAL^a, Frédéric LEBON^b, Isabelle TITEUX^a

^a Groupe de Mécanique, Matériaux et Structures, E.A. n° 2617 UFR des Sciences
Exactes et Naturelles, Université de Reims- Champagne-Ardenne Moulin de la
Housse, BP1039, Reims Cedex 2, France

^b CNRS, Laboratoire de Mécanique et d'Acoustique 31, chemin Joseph Aiguier,
13402 Marseille Cedex 20, France. lebon@lma.cnrs-mrs.fr

Influence of calcite on the microstructure and mechanical properties of pottery
ceramics from Burkina Faso.

K. Traoré^a, G.V. Ouédraogo^a, P. Blanchart^b, J.-P. Jernot^c, **M. Gomina**^{c*}

^a Laboratoire de Physico-Chimie et de Technologie des Matériaux, Faculté des
Sciences et Techniques, Université de Ouagadougou, 03 B.P. 7021 Ouagadougou 03,
Burkina Faso.

^b Ecole Nationale Supérieure de Céramique Industrielle (ENSCI), 43-73 Avenue
Albert Thomas, 87605 Limoges Cedex, France.

^c Equipe Structure et Comportement Thermomécanique des Matériaux (ESCTM) du
CRISMAT, UMR 6508 CNRS/ENSICAEN, 6 Bd Mal Juin, 14050 Caen Cedex 4,
France.

Growth and Structure of Thin Oxide Films on Aluminum Substrate : Variable- Charge Molecular Dynamics Simulations

A. Hasnaoui, O. Politano

^a Laboratoire de Recherches sur la Réactivité des Solides – UMR 5613 CNRS
Faculté des Sciences Mirande – 9 Av. Alain Savary – 21000 Dijon - France

A simplification in the estimation of viscoelastic properties of composites materials

Bernard Hosten and Michel Castaings

Laboratoire de Mécanique Physique, Bordeaux 1 University, UMR C.N.R.S. 5469,
351 cours de la Libération, 33405 Talence Cedex, France

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www.africamsconf3.univ.ma

Gilles Le Flem

Institut de la Chimie de la Matière Condensée, UPR CNRS 9048
87 Avenue du Dr Schweitzer 33608 PESSAC (France)

**SCREEN-PRINTED PIEZOELECTRIC THICK FILMS FOR HIGH
RESOLUTION ULTRASONIC MEDICAL IMAGING**

Pierre Maréchal^a, Franck Levassort^a, Janez Holc^b, Louis-Pascal Tran-Huu-Hue^a,
Marija Kosec^b, Marc Lethiecq^a

^a Francois-Rabelais University, LUSI, EIVL, BP 3410, 41034 Blois cedex, France

^b Jozef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia

**POLYMER-POLYMER INTERDIFFUSION AND REACTION AT THE INTERFACES IN
MULTILAYERS ROTATIONAL MOLDING PROCESS.**

K.Lamnawar **A.Maazouz***.

*INSA de Lyon- Site de plasturgie- Laboratoire de recherche pluridisciplinaire en plasturgie BP
807 01108 Oyonnax- France- Abderrahim.maazouz@insa-lyon.fr; khalid.lamnawar@insa-lyon.fr.

**GROWTH OF SILICON AND GERMANIUM ON SILVER SURFACES:
FORMATION OF UNEXPECTED SURFACE ALLOYS.**

H. Oughaddou^a, C. Léandri^a, B. Aufray^a, G. Le Lay^a, J-M. Gay^a and J-P. Bibérian^a

^aCRMCN-CNRS, Campus de Luminy, Case 913, 13288 Marseille

**RAYLEIGH SURFACE WAVE ALONG A GRADUALLY DAMAGED
CONCRETE SPECIMEN: AN ANALYSIS ON THE SENSITIVITY OF
DISPERSIVE ULTRASONIC WAVES IN DETECTING CONTINUOUS
INHOMOGENEITY**

O. Poncelet, C. Baron, M. Castaings, A. Shuvalov, M. Panet and M. Deschamps

Laboratoire Mécanique Physique, Université Bordeaux 1, FRANCE

**MODAL WAVE DECOHERENCE WITHIN A FLUID LAYER WITH A
ROUGH SURFACE**

Catherine Potel^a, Michel Bruneau^a, Bruno Morvan^b, Jean-Louis Izbicki^b,
Anne-Christine Hladky^c, Claude Depollier^a

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www.africamrsconf3.univ.ma

Multi-functionalized new organometallic nano-composites for nonlinear optical applications

B. Sahraoui, A. Migalska-Zalas^{1,2}, I. V. Kityk² and J. Berdowski²

¹Université d'Angers, 2, Boulevard Lavoisier, 49045 Angers Cedex (France)
Laboratoire POMA, UMR CNRS 6136

²Institute of Physics, J. Dlugosz University of Częstochowa, Pl-42200, Al. Armii
Krajowej 13/15, Częstochowa Poland

Mecanical properties of cellular materials under impact loading

H. Zhao, S. Abdenadher, I. Nasri

Laboratoire de Mécanique et Technologie, ENS-Cachan/CNRS/University Paris 6
61, Avenue du président Wilson, 94235 Cachan cedex, France

GERMANY

**BROAD BAND ELECTROMAGNETIC ABSORPTION OF FLEXIBLE FOILS
IN THE HIGH FREQUENCY RANGE**

P. Goernert, P. Payer, O. Surzhenko, L. Michalowsky^a
H. Heegn, E. Madai^b
M. Langer^c

^a Innovent, Pruessingstr. 27 B, D-07745 Jena, Germany

^b UVR-FIA, Chemnitzer-Str. 40, D-09599 Freiberg/Sachs., Germany

^c FILK, Meissner Ring 1-5, D-09599 Freiberg/Sachs., Germany

Lanthanide Compounds of Boron Nitride

H.-Jürgen Meyer

Section for Solid State and Theoretical Inorganic Chemistry, Institute of Inorganic
Chemistry, University of Tübingen, Auf der Morgenstelle 18, Tübingen, Germany

ITALIA

**ALKALI-SILICA GLASSY MATRIXES AS REPLACEMENT OF FELDSPAR
IN CONVENTIONAL PORCELAIN COMPOSITIONS**

E. Kamseu^a, C. Leonelli^a, D. N. Beccaccini^a, Paolo Veronesi^a, V. M. Sglavo^b, U. C.
Melo^c and D. Njopwouo^d

^aDipartimento di Ingegneria dei Materiali e dell'Ambiente,

Università di Modena e Reggio Emilia, Via Vignolese 905, 41100 Modena, Italy

Conference secretary: 3rd Africa-MRS Conference (Prof. Abdelaziz El Jazouli)
Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.

, Web site: africamrsconf3@yahoo.fr Phone: +212 63296431 Fax : +212 22704675 Email:
www.africamrsconf3.univ.ma

^bDipartimento di Ingegneria dei Materiali e Tecnologia Industriali, Università di
Trento, Via Mesiano 77, Povo-Trento, Italy

^cLaboratoire de Matériaux et de Contrôle de Qualité, MIPROMALO, 2396 Yaounde,
Cameroon

^dLaboratoire de Physico-chimie des matériaux Minéraux, Université de Yaoundé I,
812, Yaounde, Cameroon

POLAND

Linear and nonlinear optical properties of zinc phthalocyanine

**W. Bala¹, M. Wojdyla¹, B. Derkowska¹, Z. Łukasiak¹,
Z. Sofiani^{2,3} and B. Sahraoui²**

¹Institute of Physics, UMK, Grudziądzka 5/7, PL 87-100 Toruń, Poland

²Laboratoire POMA, UMR CNRS 6136, Université d'Angers, 2 Boulevard Lavoisier,
49045, Angers Cedex 01, France

³Laboratoire Optoélectronique et Physico-Chimie des Matériaux Université IbnTofail,
Faculté des Sciences BP 133 Kenitra 14000, Maroc

RUSSIA

MICROSTRUCTURED PHOTONIC OPTICAL FIBERS

Yu.K. Chamorovskii, Yu.V. Gulyaev^{*}, S.A. Nikitov, M.V. Ryabko,

¹Institute of Radioengineering & Electronics, Russian Academy of Sciences,
125009, 11 bldg.7, Mokhovaya St., Moscow, Russia

^{*}E-MAIL: NIKITOV@CPLIRE.RU

MAGNETO-PHONONIC AND MAGNONIC CRYSTALS – NEW TYPES OF
MAGNETIC AND ACOUSTIC MATERIALS

S.A.Nikitov^{1*}, Yu.V. Gulyaev¹, Ph. Tailhades²

¹Institute of Radioengineering & Electronics, Russian Academy of Sciences,
125009, 11 bldg.7, Mokhovaya St., Moscow, Russia

^{*}E-MAIL: NIKITOV@CPLIRE.RU

²CIRIMAT, UMR-CNRS 5085, Université Paul Sabatier,
118 Rte de Narbonne, 31062 Toulouse Cedex, France

SPAIN

SINGLE COMPONENT MOLECULAR CONDUCTORS BASED ON TRINUCLEAR CLUSTER CHALCOGENIDES

**Rosa Llusar^a, Sonia Triguero^a, Cristian Vicent^a, Santiago Uriel^b & Carlos J. Gómez-
García^c**

Conference secretary: 3rd Africa-MRS Conference (Prof. Abdelaziz El Jazouli)

Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.

, Web site: africamsconf3@yahoo.fr Phone: +212 63296431 Fax : +212 22704675 Email:

www.africamsconf3.univ.ma

^a Department of Experimental Sciences, University Jaume I, Castellón, Spain
^b Department of Organic Chemistry, University of Zaragoza, Zaragoza, , Spain
^c ICMol, University of Valencia, Burjassot, Spain

Conference secretary: 3rd Africa-MRS Conference (Prof. Abdelaziz El Jazouli)
Faculté des Sciences Ben M'Sik-UH2M.-Casablanca, Morocco.
, Web site: africamsconf3@yahoo.fr Phone: +212 63296431 Fax : +212 22704675 Email:
www.africamsconf3.univ.ma