

Preface

The “Journées Scientifiques Algéro-Françaises” (JSAF) were organized from 29th November to 13th December 2004. They followed TAM-MAT [1], the first French Algerian Scientific Congress devoted to “Emerging Materials”, which took place at Tamanrasset from 22 to 25 February 2003.

TAM-MAT gave Algerian scientists the very strong hope that the dark past was behind them, and the JSAF meeting confirmed this prophecy. These “Journées Scientifiques Algéro-Françaises” were coordinated in the framework of the cooperation contract between Ferhat Abbas University of Sétif (UFAS) and Louis Pasteur University of Strasbourg (ULP), signed in September 2003. Moreover, two other Algerian Universities, namely Jijel and Ouargla, were active participants in this organization. A series of presentations was first given at Ferhat Abbas University of Sétif on “Seismology, Environment and Magnetism”; then a School was held at Jijel in “Physics and Chemistry”; finally a Colloquium on “Environment, Materials, Physics and Energy” took place at Ouargla. The Heads of these three Algerian Universities provided the driving force for the organization of JSAF2004.

The opening ceremony gave the first indication of the importance and recognition of JSAF2004 and of its Conferences at Sétif by the presence of dignitaries from the city and from the Universities of Sétif, Jijel, Ouargla, Strasbourg and Mulhouse. A very warm welcome was given by Professor Ismaël Debèche, Rector of the University Ferhat Abbas of Sétif, by Dr. Abdelmalek Zennir, Rector of the University of Jijel, and by Professor Tayeb Meftah, from the University of Ouargla. Professor Mustapha Maamache, Dean of the Faculty of Sciences of the University Ferhat Abbas of Sétif, who was the Algerian coordinator, also presented a welcoming speech. Our Algerian colleagues were warmly thanked by Professors Michel Granet and Michel Faure, respectively, Vice-President of Louis Pasteur University of Strasbourg and Vice-President of “Haute-Alsace University” (UHA) of Mulhouse. To highlight the important and active collaboration between UFAS and ULP, a co-directed PhD thesis was defended, just after the opening ceremony, by Abdelfettah Belafrites. On the evening of the second day a roundtable took place, entitled: “Main axes of UFAS–ULP and UFAS–UHA cooperation: human and financial aspects”. At Sétif, we were very pleased by the short visit of the Algerian Minister of Housing during the session that focussed on seismology.

The School at Jijel took place from the 4th until the 9th of December 2004. The importance and recognition of this school was marked by the presence of the “Walli” of Jijel, political representatives of the city, Dr. Abdelmalek Zennir, Rector of the University of Jijel, Professor Mustapha Maamache, Dean of the Faculty of Sciences of the University of Sétif, Professor Michel Faure, Vice-President of UHA and Dr. François Garin as ULP representative. The 6 days of this school were divided in two parts: one devoted to “Theoretical Physics and Mathematics”, the other to “Experimental Physics and Chemistry and Modelisation”. The chairmen were, respectively, Professor Michel le Bellac from the University of Nice and Dr. Aimé Mosser from ULP. The attendance in this school was around 60 students for each of the two themes; university staff attended this school as well.

A roundtable was organized on the last day. The main points raised concerned the possible benefits of this school and what frequency of such an event would be most fruitful.

The last destination was Ouargla where the Colloquium took place from 11 to 13 December 2004. The very official opening session was attended by Dr. M.K. Tidjani, Rector of the University of Ouargla, Dr. M. Hadj Mhammad, Vice-Rector of the University of Ouargla, Professor M.T. Meftah, organizer of this Colloquium, several important persons representing the city, Professor M. Maamache, Dean of the Faculty of Sciences of the University of Sétif, Dr. E. Leghouchi, Dean of the Faculty of Sciences of the University of Jijel, and Dr. F. Garin, representative of the ULP University. The topics of this Colloquium were: “Environment, Materials, Energy” and “Theoretical Physics and Mathematics”. Only the papers pertaining to “Environment, Materials, Energy” appear in these proceedings.

More than 150 participants attended these two conferences, 120 of whom were Algerians. At the end of this congress, 35 papers, related to “Environment, Materials, Energy”, were submitted for publication in this journal, among which 22 written contributions were retained by peer review for publication.

Eleven papers directly concerned catalysis:

- From surface science to nanotechnology.
- Nucleation, growth and properties of nanoclusters.
- Acidity and Pd pillared catalysts plus sulphated zirconia (two papers).
- Gold catalysts total oxidation (two papers).

- Dry reforming of methane and CO₂ reforming of methane (two papers).
- Theory of NO adsorption on surface O atoms of metal oxides.
- DeNO_x reaction.
- Ni–Ce intermetallic phases in CeO₂.

The remaining papers were devoted to the preparation and physical properties of nanomaterials:

- Electrical and optical study of Cu(In,Ga)Se₂ co-evaporated thin films.
- Fabrication and characterization of CuInSe₂/Si(1 0 0) thin films by the stacked elemental layer technique.
- Electrochemical nucleation and growth of Co and CoFe alloys on Pt/Si substrates.
- Synthesis and characterization of high-energy ball milled nanostructured Fe₅₀Ni₅₀.
- Structural properties of CoPt films patterned using ion irradiation.
- Zn_{1-x}Co_xO diluted magnetic semiconductors synthesized under hydrothermal conditions.
- ZnTe precipitates formed in SiO₂ by sequential implantation of Zn⁺ and Te⁺ ions.
- Effects of experimental parameters on the physical properties of non-stoichiometric sputtered vanadium nitrides.
- Understanding the atomic force microscopy image of the V₂O₅ and Li_{0.03}V₂O₅(0 0 1) surface using ab initio calculations.
- Structural and optical properties of spray pyrolysis MoO₃ and V₂O₅ thin films.
- Magnetic structure of fcc Fe films on Co(1 1 1).

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Scientifiques d’Automne à Tizi-Ouzou” in November 2005. For 2006 three events will take place: a Colloquium on Numerical Simulation at Mascara at the end of March 2006; a School on Magnetic Nanostructures at Guelma, in the beginning of April 2006. In late 2006 (November 11–13) a workshop entitled OASIS will be held at Bechar: OASIS is the acronym for order–disorder (O), alkane (A) and more generally the energies of the future, (SI)mulations (numerical) and (S) for spin (mainly materials for spintronics). In addition to these scientific meetings, a strong collaboration focusing on progress in teaching was initiated by Professor Mustapha Maamache, Dean of the Faculty of Sciences of the University of Sétif and Professor Jean-Pierre Munch, Head of the Department of Physics of Louis Pasteur University of Strasbourg.

Reference

- [1] F. Garin, J.-C. Parlebas, C. Minot, M. Guemmaz, *Catal. Today* 89 (2004) 253–254.

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