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14. ABSTRACT

The Tunisian Physical Society "Societe Tunisienne de Physique" (STP) was established in 1981. It is a scientific association with non-profit professional goal whose objective is to create a scientific framework grouping all the physicists (all confused disciplines) of all the university institutions, schools, industrial and agricultural, with an aim of raising the physical sciences and its developing in all the fields. The primary purposes of the society are to advance research and scholarly exchange in the study of physical sciences, to provide means for research and publications, and to organize and support national and international conferences.
The scope of the conference was to provide an interdisciplinary forum and to bring together researchers from various fields to discuss latest developments and challenges of conducting and superconducting materials which are believed to be quite promising not only for nanotechnology but also for fundamental physics.

The proceedings of the ICoCoM2010 will be published in two special issues
(1) A special issue of Synthetic Metals for basically the topics related to conducting polymers. The issue will contain 20-25 of the selected papers(http://www.elsevier.com/wps/find/journaldescription.cws_home/504105/description#description).
(2) A special issue of Journal of Physics: Condensed Matter, related the topics dealing with superconducting materials and strongly correlated electron systems. This issue will not include only papers from the conference attendees but also contributions from invited authors selected by the scientific committee and the journal Editorial Board. There will be roughly 40 accepted papers (http://iopscience.iop.org/0953-8984/).

15. SUBJECT TERMS

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SOCIÉTÉ TUNISIENNE DE PHYSIQUE

REPORT OF THE

INTERNATIONAL COnference on COnducting Materials

New Trends in Conducting Materials:
From Fundamentals to Applications

3RD-7TH NOVEMBER 2010 SOUSSE – TUNISIA

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Organizing Committee

Samir Romdhane (Chair)
Samia Charfi-Kaddour (Co-chair)

Dorra Abidi
Amel Benfredj-Romdhane
Sonia Haddad
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Lassaad Mandhour
Riadh Neffati
Mourad Telmini
Mohamed Ali Zaïbi

Coordination Committee

Najeh Thabet Mliki (President of the Tunisian Physical Society STP)
Tahar Othman (Treasurer of STP)
Mourad Bouterraa (Secretary-General of STP)

Conference Web site

http://www.stp.org.tn/ICOCOM2010

Sponsors

The organizers have provided assurance that ICoCoM 2010 will be conducted in accordance with IUPAP principles as stated in the ICSU-Document "Universality of Science" (sixth edition, 1989) regarding the free circulation of scientists for international purposes. In particular, no bona fide scientist will be excluded from participation on the grounds of national origin, nationality, or political consideration unrelated to science.

We wish to thank European Office of Aerospace Research and Development, Air Force Office of Scientific Research, United States Air Force Research Laboratory (www.london.af.mil) and all the sponsors for their contribution to the success of this conference

FOREWORD

The International Conference on Conducting Materials (ICoCoM2010) has been successfully held in Sousse, Tunisia from 3rd to 7th November 2010. We are pleased to share this proceeding report to all of you who have been involved during the conference as well as those who were not able to attend the conference. May we take this opportunity to express our profound thanks and appreciation to all of the distinguished speakers and to the contributions of all attendees who are willing to share their experiences and to make the conference success.

We would also like to express our gratitude to those who contributed to complete this work especially national and international committee members for the valuable works.

Chair of ICoCoM 2010
Samir Romdhane
Co-Chair of ICoCoM 2010
Samia Charfi-Kaddour

Purpose of ICoCoM2010

The Tunisian Physical Society " Société Tunisienne de Physique" (STP), was established in 1981. It is a scientific association with non-profit professional goal whose objective is to create a scientific framework grouping all the physicists (all confused disciplines) of all the university institutions, schools, industrial and agricultural, with an aim of raising the physical sciences and its developing in all the fields. The primary purposes of the society are to advance research and scholarly exchange in the study of physical sciences, to provide means for research and publications, and to organize and support national and international conferences.

The scope of the conference was to provide an interdisciplinary forum and to bring together researchers from various fields to discuss latest developments and challenges of conducting and superconducting materials which are believed to be quite promising not only for nanotechnology but also for fundamental physics.

The topics covered by the conference were:
1/ Organic Conductors:

- New conjugated polymers and oligomers: Synthesis and characterization
-Hybrid Organic-Inorganic structures
- Organic Electronics: Theoretical considerations
- Electronics application: photovoltaic devices, OLEDs and field effect transistors...
- Organic nanomaterials
- Nonlinear optical effects and applications

2/ Superconducting materials:

- Developments in High-Tc superconductors
- Superconducting materials: Iron based superconductors, Novel molecular materials
- Graphene and Carbon nanotubes: Experiments, theory and applications
- Low dimensional organic superconductors: new aspects from experiments to theory
- New quantum phenomena in strongly correlated systems

Tuesday 2nd November 17h30

Opening ceremony

The Conference opened at 17:30 pm on with a statement by Pr. Samir Romdhane as Chair of ICoCoM 2010. The opening panel included Pr. Refaat Chaabouni, Secretary of State to the Minister of Higher Education and Scientific Research, in charge of Scientific Research, M. Taïeb Ragoubi, Governor of Sousse, Pr. Ahmed Noureddine Hlel, President of University of Sousse, Pr. Najeh Thabet-Mliki, President of the Tunisian Physical Society (Société Tunisienne de Physique) and Pr.Samia Kaddour-Charfi Co-Chair of ICoCoM 2010.

The conference was officially opened by Secretary of State to the Minister of Higher Education and Scientific Research, in charge of Scientific Research, Pr Refaat Chaabouni, who gave a large overview of research in Tunisia and the effort of the Minister of Higher Education and Scientific Research to improve the performance of research in Tunisia, especially in the priority axes of the government. Pr Chaabouni congratulated the participants of the conference on its opening and wished it a successful and fruitful work.

Opening Ceremony Speech

by Pr. Samir Romdhane Chair of ICoCoM2010

Honourable Secretary of State in charge of Scientific Research, honourable Governor of Sousse, Honourable President of The University of Sousse, honourable guests.

It is a real pleasure to welcome such an eminent gathering of professors and researchers in Tunisia. I would also like to welcome our honourable guests and all of you and I wish all of you a pleasant stay among us and success in your work.

I will make my introductory speech as short as possible and focus on the following point by answering the question:

What brought us together to organize the ICoCoM conference?

The main motivation of the board of the Tunisian Physical Society by organizing such a conference is to improve his international activities in order to inspire, train, and support leading scientists and help in the development of the research in Tunisia and more generally in Africa. By organizing specialized and high quality conferences, schools, meetings, with acceptable fees, the TPS would like to make them accessible for a large number of scientists especially for young researchers from developing countries.

The scope of the conference is then to bring together researchers from various fields to discuss latest developments and challenges of conducting and superconducting materials. The conference should provide an interdisciplinary forum to exchange recent results and to promote new frontiers in the physics of those materials.
This event is substantially important to support research activities in North Africa, since it is devoted to the rapidly growing domain of the physics of conducting materials where various fields of fundamental Science and technology interact close together.

The two main topics covered by our conference are:

1) Organic Conductors:

2) Superconducting materials

First why organic materials:

Organic Conductors have received more attention after Y2K when Alan J. Heeger, Alan G. McDiamid and Hideki Shirakawa received the Nobel Prize in Chemistry “For the discovery and development of conductive organic polymers",
One of the main reasons for developing organic semiconductors instead of mineral ones is their potential in producing lower cost devices. For example, countries like Tunisia, Algeria, Morocco or other African countries can't compete with multinational companies in the fabrication of integrated circuits based on silicon. One manufactory costs at least some billions of dollars. Also their mechanical properties (light weight, flexibility and elasticity, ease of production of thin layers by special printing techniques) are some advantages over their inorganic counterparts. However, they have quite a few disadvantages like their higher chemically reactivity, which means they need more protection by encapsulation. Because of lower melting point they are more temperature sensitive in comparison to inorganic semiconductors and finally the process of the charge transfer mechanisms remains not completely elucidated. We have a lot of works to do.

Despite those disadvantages, organic semiconductors are now successfully used in commercial Organic Light Emitting Diodes, solar cells, and field effect transistors... Overall organic conductors are still fashionable materials that offer renewable exciting opportunities for the researchers from different fields, (physicists, chemists, electrical engineers,..). Their recent use in flat screen display makes them more attractive versus industry.

The second issue in our conference deals with Superconducting materials. This topic is also one of the most emphasis domains in nowadays. As for organic conductors it is a multi-disciplinary subject that needs contribution from physicist, chemists and industrials.

Since the discovery of high critical temperature in 1986, the physicists have renewed interest for superconductivity. Many new superconductors have since been discovered, and the theory of superconductivity in these materials is one of the major outstanding challenges of theoretical condensed matter physics. In February 2008, an iron-based family of high temperature superconductors was discovered. But a lot of work has still

to be done to improve superconducting properties and to reach room-temperature superconductivity.

The superconducting materials are used to produce stable magnetic field for NMR, MRI and also to detect very low magnetic fields. Promising future applications include high-performance smart grid, electric power transmission, transformers, power storage devices, electric motors (e.g. for vehicle propulsion, or maglev trains), magnetic levitation devices, fault current limiters and superconducting magnetic refrigeration.

Finally, one of our fondest wishes is to facilitate discussions between participants, young and senior ones, from all countries. So I would now like to speak to young researchers asking them to make this event a lively one, to ask questions, to discuss with invited speakers and to propose new ideas.

More than 160 participants, from 24 countries, will attend this conference to participate to nine (9) plenary sessions, 30 invited talks, 62 oral presentations and 90 poster presentations.

We gratefully appreciate the financial supports from the Ministry of Higher Education and Scientific Research, University of Sousse, Faculty of Sciences of Tunis, TunisAir, the "La Société Italo-Tunisienne d'Exploitation Pétrolière (**Sitep**)", the International Union of Pure and Applied Physics (***IUPAP***), the Abdus Salam International Centre for Theoretical Physics (***ICTP***), the European Office of Aerospace Research and Development, Air Force Office of Scientific Research, United States Air Force Research Laboratory (**EOARD**), **V**ermeg and the "Institut Français de Coopération, Tunisie" (**IFC**).
These funds helped us to reduce the participation fees for young students and colleagues from developing countries.

With these few words may I once again, welcome you to Tunisia, land of tolerance and hospitality, and once again, I would like to thank all of you who participate in this conference and have prepared substantial contributions. Our special thanks go to the invited speakers who kindly accepted our invitation. I would like also to thank the members of the Organizing Committee, who worked very hard, and everybody who worked to make this event successful.

I wish every success to our conference. Enjoy your stay in our country. I hope you will have the opportunity to enjoy the beauty of Sousse, and to find out as much as possible during the conference about the progress of our country.

Thank you

Annexure

Annexure 1

International advisory committee

Younes Abid (Tunisia)

Kamel Alimi (Tunisia)

Thierry Barisien (France)

Heinz Bässler (Germany)

Raouf Bennaceur (Tunisia)

Antonio Bianconi (Italy)

Hélène Bouchiat (France)

Habib Bouchriha (Tunisia)

Claude Bourbonnais, (Canada)

Serguei Brazovski (France)

Stuart Brown (USA)

Samia Charfi-Kaddour (Tunisia)

Eugenio Coronado (Spain)

Joel Davenas (France)

Martin Dressel (Germany)

Habib Elhouichet (Tunisia)

Jean-Louis Fave (France)

Francis Garnier (France)

Kazushi Kanoda, (Japan)

Michel Héritier (France)

Gilles Horowitz (France)

Ivo Alexandre Hümmelgen (Brazil)

Kazushi Kanoda, (Japan)

Natasha Kirova, (France)

Murata Keizo, (Japan)

Anna Köller, (Germany)

Ouahab Lahcène (France)

Mustapha Majdoub (Tunisia)

Daniel Ayuk Mbi Egbe (Austria)

Klaus Meerholz (Germany)

Yung Woo Park (Korea)

Claude Pasquier (France)

Davor Pavuna (Switzerland)

Nathaniel D. Robinson (Sweden)

Inès Safi (France)

Thierry Giamarchi, (Switzerland)

Mark Goerbig (France)

Lotfi Hassine (Tunisia)

Michel Héritier (France)

Gilles Horowitz (France)

Ivo Alexandre Hümmelgen (Brazil)

Joe Shinar (USA)

John Singleton (USA)

Cristiane. Morais Smith (Netherlands)

Peter Spearman (U.K)

André-Marie Tremblay (Canada)

Shinya Uji (Japan)

Andrei Varlamov (Italy)

Annexure 2

Scientific Program

Wednesday 3rd November

Morning Session

8:15-8:30	**Welcome address**
	Plenary Session 1
	Chairperson: Tremblay
8:30-9:15	**Garnier (France)** Research strategies toward Efficient Photovoltaics
9:15-10:00	**Kanoda (Japan)** Electron correlation and spin frustration in quasi-triangular lattice organics
10:00-10:30	**Coffee Break**

Session I: Organic Conductors

	Invited Session 1: IOC1
	Solar cells
Chairperson: Egbe	
10:30-11:00	**Davenas (France)** Hybrid nanomaterial for solar cells: new challenges and perspectives
	Oral Session OOC1
11:00-11:20	**Mabrouk (Tunisia)** Theoretical modelling of some properties of donor–acceptor copolymers for bulk heterojunction solar cells
11:20-11:40	**Teketel (Ethiopia)** Conducting Polymers Based Photoelectrochemical Solar Energy Conversion
11:40-12:00	**Reguig (Algeria)** Investigation of low resistance transparent MOO3/AG/MOO3 Multilayers-Applications as anode in organic solar cells
12:00-12:20	**Ghribi (Tunisia)** Effect of substrate on properties of RF magnetron sputtered CuInS2 thin films from nanoparticles synthesised by solvothermal route
12:30-14:30	**Lunch**

Session II: Superconductors and Related Materials

Invited Session 1: ISC1	
Low dimensional superconductors	
Chairperson: Uji	
10:30-11:00	**Dressel (Germany)** Fermi-Liquid vs. Non-Fermi-Liquid Behavior in Organic Conductors
11:00-11:30	**Boubonnais (Canada)** Superconductivity on the verge of spin density-wave order in low dimensional conductors
11 :30-12:00	**Tanda (Japan)** Exotic Properties in Topological Crystals
Oral Session OSC1	
12:00-12:20	**Makogon (The Netherlands)** Spin-charge-density wave instability in 2D tight-binding models
11:20-12:40	**Cano-Cotes (Spain)** Quantum criticality in quarter-filled layered organic materials
12:30-14:30	**Lunch**

Afternoon Session

Session I: Organic Conductors

Invited Session 2: IOC2
Conductivity in carbon based nanostructures
Chairperson: Davenas

14:30-15:00	**Hümmelgen (Brazil)** Organic semiconductor based vertical architecture transistors
	Oral Session OOC2
15:00-15:20	**Najeh (Tunisia)** Non-linear conductivity in nanoporous carbon structures
15:20-15:40	**Machado (Brazil)** WORM memory based on a carbon nanosphere-poly(vinylphenol) composite device
15:40-16:00	**Guellati (Algeria)** H2-EtOH Effect During ACCVD synthesis
16:00-16:20	**Marchiori** (Brazil) Density Functional Theory Study of polymer/fullerene supramolecules for solar cell applications
16:30-17:00	**Coffee Break**

Invited Session 3: IOC3
Conductivity in carbon based nanostructures
Chairperson: Boukherroub

17:00-17:30	**Robinson** (Sweden) Graphene electrodes for metal-free organic light-emitting devices
	Oral Session OOC3
	Special Talk
17:30-18:00	**Ullah, (Austria)** A comparative study of charge transport and Meyer-Neldel rule in Fullerene devices
18:00-18:20	**Schwabegger (Austria)** High mobility, low voltage operating C60 based n-type Organic Field. Effect Transistors
18:20-18:40	**Ayachi (Tunisia)** Optical and vibrational studies of grafting short

Session II: Superconductors and Related Materials

Invited Session 2: ISC2	
Low dimensional organic superconductors	
Chairperson: Bourbonnais	
14:30-15:00	**Brown (USA)** NMR studies of the superconducting states of quasi-one and quasi-two dimensional molecular conductors
15:00-15:30	**Uji (Japan)** Density-of-state Oscillation of Quasiparticle Excitation in Spin Density Wave Phase of $(TMTSF)_2ClO_4$
15:30-16:00	**Héritier(France)** Critical fields and phase diagram of quasi-1D organic conductors in a large applied magnetic field
16:30-17:00	**Coffee Break**

Oral Session OSC2	
Low dimensional superconductors (Theory)	
Chairperson: Brown	
16:30-16:50	**Himura (Japan)** Pressure dependence of magnetoresistance in α-(BEDT-TTF)2I3
16:50-17:10	**Yoshimi (Japan)** Spin frustration and Charge ordering in TMTTF salts
17:10-17:30	**Kato (Japan)** Theoretical Study of Finite-temperature Phase Diagram in Charge-Transfer Organic Complexes
17:30-17:50	**Charfi-Kaddour (Tunisia)** Pseudogap, quasi-particle behavior and optical conductivity in normal state of κ-(BEDT − TTF)2X
19:00	**Dinner**

Thursday 4th November

Morning Session

Plenary Session 2
Chairperson: Giamarchi

8:30-9:15 **Triscone (Switzerland)**
Tuning Normal State and Superconducting Properties at the LaAlO3/SrTiO3 Interface

Session I& II

Invited Session
Organic molecular design
Chairperson: Bässler

Special Talk

9:15-9:45 **Yamaguchi (Japan)**
Experiment of 200-meter Superconducting DC cable and R&D Subjects for Long Transmission Line

9:45-10:15 **Coronado (Spain)**
Molecular Spintronics using magnetic molecules and hybrid materials

10:15-10:45 **Ouahab (France)**
Multifunctional Molecular Materials : Conductivity and Magnetism

10:45-11:15 **Coffee Break**

Session I: Organic Conductors

Invited Session 5: IOC5	
Elaboration of new organic Materials	
Chairperson: Robinson	
11:15-11:45	**Spearman (UK)** Molecular crystal growth on surface modified SiO2 substrates
Oral Session OOC4	
11:45-12:05	**Ouili (Algeria)** Elaboration and characterization of the new hybrid material resulting from the mixture of polyaniline and SnNb5Se9
12:05-12:25	**Haïne (Algeria)** The influence of doping mode on the properties of polyaniline by acid sulfanilic
12:30-14:30	**Lunch**

Session II: Superconductors and Related Materials

Oral Session OSC3	
Low dimensional superconductors: Experimental Investigation	
Chairperson: Smith	
11:15-11:35	**Ishioka (Japan)** Chirality in Charge-Density-Waves: STM measurement and Optical Polarimetry on 1T-TiSe2
11:35-11:55	**Kawamoto (Japan)** Electronic States of the Weakly Incoherent Layered Organic Superconductor H-(DMEDO- TSeF)2[Au(CN)4](THF)κ
11:55-12:15	**Trunin (Russia)** Microwave Surface Impedance of κ-(BEDT-TTF)2Cu[N(CN)2]Br Single Crystals
12:30-14:30	**Lunch**

Afternoon Session

Plenary Session 3	
Chairperson: Garnier	
14:30-15:15	**Park (Korea)** Fundamental Properties and Applicability of Carbon based Nanostructures: Implication for biomolecular Sensors
15:15-16:00	**Bouchiat (France)** Competition between Kondo Physics and Josephson effect in carbon nanotubes
16:00-16:30	**Coffee Break**

Session I: Organic Conductors

Invited Session 6: IOC6 Organic transistors	
Chairperson: Hümmelgen	
16:30-17:00	**Horowitz (France)** Alternative gating modes for the organic transistor
Oral Session OOC5	
17:00-17:20	**Albonetti (Italy)** Phase – Electrostatic Force Microscopy measurements on operating Pentacene Thin Film Transistor
17:20-17:40	**Rossi (Brazil)** Organic Vertical Field Effect Transistor using DPIF as organic Semiconductor
17:40-18:00	**Seidel (Brazil)** Analysis of the Transition from bulk transport to surface transport in organic field effect transistors"
18:00-18:20	**Benfdila (Algeria)** Investigation on the Organic FETs Performances and Applications
19:00	**Dinner**
20:30-22:30	**Poster session**

Session II: Superconductors and Related Materials

Invited Session 4: ISC4	
Graphene and related materials	
Chairperson: Singelton	
16:30-17:00	**Georbig (France)** Collective Excitations of Electrons in a Strong Magnetic Field: The Difference between Graphene and Semiconductor Heterostructures
17:00-17:30	**Kusmartsev (UK)** Is Graphene or Silicene a Glass? Or can they exist in two-dimensional form?
17:30-18:00	**Montambaux (France)** " Motion and merging of Dirac points in two-dimensional crystals
Oral Session OSC4	
18:00-18:20	**Nawrocki** (Poland) Electrical and thermal conductance quantization in nanostructures
18:20-18:40	**Miyagawa (**Japan) Magnetism in metallic and zero-gap states of a bulk quasi-two dimensional organic conductor, θ-(ET)2I3
19:00	**Dinner**
20:30-22:30	**Poster session**

Friday 5th November

Morning Session

Plenary Session 4	
Chairperson: Horowitz	
8:30-9:15	**Bassler (Germany)** Exciton dissociation in organic semiconductors
9:15-10:00	**Giamarchi (Switzerland)** Cold atomic gases: quantum simulators for condensed matter
10:00-10:30	**Coffee Break**

Session I: Organic Conductors

Invited Session 7: IOC7	
Excitons in organic systems	
Chairperson: Bouchriha	
10:30-11:00	**Kirova (France)** Physics of excitons in conducting polymers
Oral Session OOC6	
11:00-11:30	**Special Talk** **Abid (Tunisia)** Hybrid Organic inorganic self assembled nanostructures for optoelectronic
11:30-11:50	**Saidani (Tunisia)** Evidence for Triplet-Triplet annihilation in α-quaterthiophene single crystal
12:30-14:30	**Lunch**

Friday

Session II: Superconductors and Related Materials

Invited Session 5 ISC5 **New theories for low dimensional systems** **Chairperson: Bouchiat**	
10:30-11:00	**Morais-Smith, (Netherlands)** Will cold atomic systems help us to understand high-Tc superconductivity?
11:00-11:30	**Safi (France)** How to measure fractional charges without recourse to current noise?
Oral Session OSC5	
11:30-11:50	**Seo (Japan)** π-d Mixed Multiband Nature and Magnetic Structure of Single Component Molecular Conductors
11:50-12:40	**Tamura (Japan)** Molecular Design of Spin Systems and Non-Bonding Orbitals
12:20-12:40	**Otsuka (Japan)** Numerical Study of One-Dimensional π-d Coupled Compound TPP[Fe(Pc)(CN)2]2
12:30-14:30	**Lunch**

Afternoon Session

Session I: Organic Conductors

Oral Session OOC7 Conductivity in organic systems	
Chairperson: Kirova	
14:50-15:10	**Saidi (Algeria)** Pressure and Doping Effects on Conducting Polyacetylene
15:10-15:30	**Beldjilali (Algeria)** Model for Charge Transport in Conducting Polymers
15:30-15:50	**Boudahri (Algeria)** Application Of Theoretical Models To Study The Electrical Conductivity Of Composite Materials
15:50-16:10	**Neffeti (Tunisia)** Fractal morphology and electrical conductivity in CB-polymer composites
16:10-16:30	**Coffee Break**
17:00	**Banquet**

Session II: Superconductors and Related Materials

Invited Session : ISC6 **High pressure-magnetic field experiments** **Chairperson: Kanoda**	
14:00-14:30	**Murata (Japan)** High Pressure and High Field Properties on TTF-TCNQ, TSeF-TCNQ and HMTSF-TCNQ
14:30-15:00	**Pratt (UK)** Spinon Condensation and Quantum Criticality of the Spin-liquid System κ–(BEDT-TTF)2Cu2(CN)3 revealed by μSR
15:00-15:30	**Singelton (USA)** Magnetic quantum oscillations in underdoped cuprate superconductors observed using fields of up to 85 T; patching the hole in the "roof" of the superconducting dome
Oral Session OSC6 **Cuprates**	
15:20-15:40	**Zhang (China)** Hall effects of Y0.74Ca0.26Ba3Cu3O7-δ/(Y1-xLax)(Ba1.74La0.26) Cu3O7-δ multilayers
15:40-16:00	**Anis-ur-Rehman (Pakistan)** Synthesis and enhancement of current density in Bi(Pb)Sr(Ba)-2223 doped by rare-earth elements
16:00-16:30	**Coffee Break**
17:00	**Banquet**

Saturday 6th November

Morning Session

Plenary Session 5	
Chairperson: Park	
8:30-9:15	**Tremblay (Canada)** Manifestations of Mott Physics in Strongly Correlated Superconductivity
9:15-10:00	**Egbe (Austria)** Polymer-Fullerene Bulk Heterojunction Solar Cells
10:00-10:30	**Coffee Break**

Session I: Organic Conductors

Invited Session 8: IOC8	
Hybrid organic-inorganic systems	
Chairperson: Abid	
10:30-11:00	**Boukherroub (France)** Photocatalytic activity of silicon nanostructured substrates under visible light irradiation
Oral Session OOC8	
11:00-11:20	**Houichet (Tunisia)** Study of energy transfer in porous anodic alumina - rhodamine 110 nanocomposites
11:20-11:40	**Abidi (Tunisia)** Hybrid Organic inorganic self assembled nanostructures for optoelectronic
11:40-12:00	**Musa (France)** Investigations of optical properties of MEH-PPV/ ZnO nanocomposites by photoluminescence spectroscopy
12:00-12:20	**Ben Jomaa (Tunisia)** Electrical and dielectric characteristics of MEH-PPV/ porous- GaAs/n+-GaAs heterojunction "
12:30-14:30	**Lunch**
14 :00	**Excursion**
19 :00	**Dinner**

Saturday

Session II: Superconductors and Related Materials

Invited Session ISC7 **HTC and disorder** **Chairperson: Dressel**	
10:30-11:00	**Varlamov (Italy)** New Approach in description of Nernst Effect"
11:00-11:30	**Bianconi (Italy)** Imaging power law distribution of dopant ordering favoring high temperature superconductivity"
11:30-12:00	**Pavuna (Switzerland)** The Challenge of In-situ Nano-Engineering of Novel High-Tc (Super-Conductors and Related Quantum Matter
Oral Session OSC7	
12:00-12:20	**Zulkifli (Malaysia)** In-situ imaging of Structural Inhomogeneity and Local Jc Estimation in HTS Superconducting Tapes for Power Application
12:20-12:40	**Haddad (Tunisia)** Inhomogeneous layered superconductors: effect of disorder and magnetic field
12:40-14:00	**Lunch**
14 :00	**Excursion**
19 :00	**Dinner**

Sunday 7th November

Morning Session
Session I: Organic Conductors

Oral Session OOC9 Optical properties of organic systems	
Chairperson: Spearman	
9:00-9:20	**Mager (France)** Functionalization of Light Induced Self-Written Waveguides for the Implementation of Integrated Non Linear Optical Properties
9:20-9:40	**Mbarek (Tunisia)** The effect of conjugation length on the emissive properties of modified PPV
9:40-10:00	**Ammi (Algeria)** First-principales studies of structural and optical properties of poly (para-phenylene vinylene
10:00-10:20	**Trigui (Tunisia)** Structural and Optical Properties of a New-PbI based Wire Crystal: (C6H13N3)2Pb3I10
10 :20-10:50	**Coffee Break**

Oral Session I& II Manganites	
Chairperson: Ben Salem	
10:50-11:10	**Tozri (Tunisia)** Magnetic transition and magnetic entropy changes in La0.7Pb0.1Na0.2MnO3
11:10-11:30	**Chihaoui (Tunisia)** Preparation and magnetic properties of Ca2+2Mn4+O42-
11:30-11:50	**Boujelbene (Tunisia)** Crossover from classical to relaxor ferroelectrics in ceramics BaTi1-x(Mn1/2Nb1/2)xO3
11:50-12:20	**Closing (Sessions I & II)**
12:30-14:30	**Lunch**

Session II: Superconductors and Related Materials

Oral Session OSC8 **Cuprates and Fe based materials**	
Chairperson: Safi	
8:30-9:00	**Ben Salem (Tunisia)** Effect of nanometer particles addition on the crystal structure and superconducting properties of high-temperature superconductors
9 :00-9:20	materials **Arcon (Slovenia)**
9 :20-9:40	Nuclear Magnetic Resonance Study of Antiferromagnetic Fluctuations in the Normal State of LiFeAs and NaFeAs
9 :40-10:00	**Mahmood (Pakistan)** "TBA "
10 :00-10:20	**Kamran (Pakistan)** Parity variation of flux quantization in a perforated superconducting thin film with periodic array of holes
	Moussa (Algeria) DFT+U study on the magnetic stability of quaternary pnictide oxides RENiPnO compounds
10 :20-10:50	**Coffee Break**

Oral Session I & II **Manganites**	
Chairperson: Ben Salem	
10:50-11:10	**Tozri (Tunisia)** Magnetic transition and magnetic entropy changes in
11:10-11:30	La0.7Pb0.1Na0.2MnO3 **Chihaoui (Tunisia)**
11:30-11:50	Preparation and magnetic properties of Ca2+2Mn4+O42- **Boujelbene (Tunisia)** Crossover from classical to relaxor ferroelectrics in ceramics BaTi1-x(Mn1/2Nb1/2)xO3
11 :50-11 :20	**Closing (Sessions I & II)**
12 :30-14 :00	**Lunch**

Summary of presented participations

Plenary sessions	Invited Talks		Oral Talks		Poster Presentations	
9	30		60		79	
	I : 9	II : 21	I : 33	II : 27	I : 52	II : 27

Annexure 3

Summary Table of Countries Participating

Algeria
Austria
Brazil
Canada
China
Cote d'Ivoire
Ethiopia
France
Germany
Italy
Japan
Korea
Libya
Morocco
Netherlands
Pakistan
Poland
Slovenia
Spain
Sweden
Switzerland
Tunisia
United Kingdom
United States

Annexure 4

Registration fees

Including transport, five (5) nights in full board accommodation*, abstract booklet, coffee breaks, banquet…

	Before 15 September 2010	After 15 September 2010	On-site
Regular	480 Euros	540 Euros	600 Euros
Participant from developing countries	350 Euros	400 Euros	450 Euros
Foreign Students	350 Euros	400 Euros	450 Euros
Tunisian	250 Euros	280 Euros	280 Euros
Industrial	650 Euros	700 Euros	800 Euros
Accompanying person	300 Euros	350 Euros	350 Euros

* To insure real interaction between researchers, all participants were lodged in the same hotel. A five Star hotel (El Mouradi Palace, ElKantaoui, Sousse, Tunisia).

Annexure 5

Financial Support

Financial Support
Invited Speakers
(All amounts are in Euros)

Name and Surname	Country	Travel expenses	Registration fees	Lodging expenses
Francis Garnier	France		250	205
Ivo Alexandre Hümmelgen	Brazil	1250		
Gilles Horowitz	France		250	205
Peter Spearman	U.K	752	250	205
Rabah Boukherroub	France		250	205
Nathaniel D. Robinson	Sweden	500	250	205
Daniel Ayuk Mbi Egbe	Austria	290	250	205
Heinz Bässler	Germany		250	205
Joel Davenas	France		250	205
André-Marie Tremblay	Canada		250	205
Claude Bourbonnais	Canada		250	205
Gilles Montambaux	France		250	205
Hélène Bouchiat	France		250	205

Supported expenses
Invited Speakers
(All amounts are in Euros)

Name and Surname	Country	Travel expenses	Registration fees	Lodging expenses
John Singleton	USA		250	205
Stuart Brown	USA	1000	250	205
Feodor Kusmartsev	U. K	752	250	205
Inès Safi	France		250	205
Mark Goerbig	France		250	205
Michel Héritier	France		250	205
Natasha Kirova	France		250	205
Ouahab Lahcène	France		250	205
Martin Dressel Physikalisches	Germany		250	205
Andrei Varlamov	Italy		250	205
Kazushi Kanoda	Japan		250	205
Murata Keizo	Japan		250	205
Shinya Uji	Japan		250	205
Yung Woo Park	Korea		250	205
Eugenio Coronado	Spain		250	205
Jean-Marc Triscone	Switzerland		250	205
Thierry Giamarchi	Switzerland		250	205

Supported expenses
Foreign Participants
(All amounts are in Euros)

Name and Surname	Country	Travel expenses	Registration fees	Lodging expenses
ElMostapha Lotfi	Morocco		250	205
Barhdadi Abdellatif	Morocco		250	205
NASREDDINE Haine	Algeria			205
Boutabia Sabah	Algeria			80
Nour Eddine Hakiki	Algeria			205
BELDJILALI Abdeslem	Algeria			205
Boudiba Louiza	Algeria			80
Belhadji Maamar	Algeria			120
Kaboub Lakhemici	Algeria			120
Amirouche Leila	Algeria			120
Saïdi Nadia	Algeria			120
Saïdi Mohamed	Algeria			120
Anis-ur-Rehman Muhammad	Pakistan	776		120
Yohannes Teketel	Ethiopia	573	250	205
Konan Kouakou	Cote d'ivoire	1393	250	205

Total travel expenses	Total registration fees	Total lodging expenses	Total
7286	**8250**	**8260**	**23796**

Annexure 6

Received funds

Subventions	Amounts	Conversion	Amounts (TND)
SITEP	3000 TND		**3000**
Minister of Higher Education and Scientific Research	3000 TND		**3000**
Odyssée	1000 TND		**1000**
University of Sousse	500 TND		**500**
Vermeg	5000 TND		**5000**
Faculty of Sciences of Tunis	1000 TND		**1000**
IUPAP	7000 €	1,91	**13370**
ICTP	4000 €	1,91	**7640**
EOARD	5000 $ US	1,32	**6600**
	Total		**41110**
	Total (€)		**21524**

TND : Tunisian Dinard

SITEP : La Société Italo-Tunisienne d'Exploitation Pétrolière.

IUPAP: International Union of Pure and Applied Physics.

ICTP : Abdus Salam International Centre for Theoretical Physics.

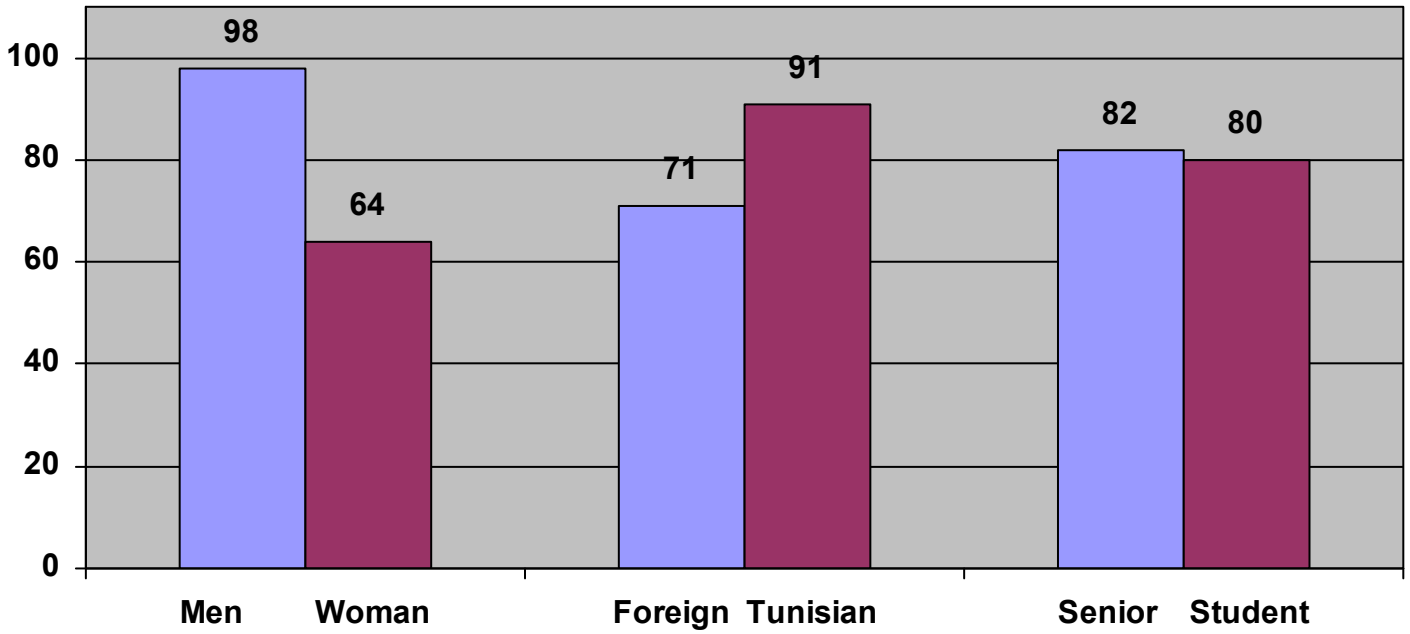
EOARD : European Office of Aerospace Research and Development, Air Force Office of Scientific Research, United States Air Force Research Laboratory.

IFC : Institut Français de Coopération, Tunisia. IFC has provided three (3) flight tickets for three invited French speakers.

Tunis-Air : According of an agreement with the Tunisian Airlines Company Tunisair, all participants in the ICoCoM2010 conference, who used Tunisair flights, have profited of 50% of discount on all air tickets Tunisair (Economic Class).

Annexure 7

PARTICIPATION STATISTICS



ICoCoM2010 attracted about 160 researchers from 24 countries

Annexure 8

PROCEEDINGS PUBLICATION

The proceedings of the ICoCoM2010 will be published in two special issues

1/ a special issue of Synthetic Metals for basically the topics related to conducting polymers.
The issue will contain 20-25 of the selected papers (http://www.elsevier.com/wps/find/journaldescription.cws_home/504105/description#description).

2/ a special issue of Journal of Physics: Condensed Matter, related the topics dealing with superconducting materials and strongly correlated electron systems. This issue will not include only papers from the conference attendees but also contributions from invited authors selected by the scientific committee and the journal Editorial Board. There will be roughly 40 accepted papers (http://iopscience.iop.org/0953-8984/).