The Abdus Salam
International Centre for Theoretical Physics

United Nations Educational, Scientific and Cultural Organization

IAEA
International Atomic Energy Agency

WORKSHOP ON NEW MATERIALS FOR RENEWABLE ENERGY
ICTP, Trieste, 17 - 21 October 2011

co-sponsored by:
CECAM, CNR-IOM DEMOCRITOS and SISSA

TITLES OF POSTER PRESENTATIONS

POSTER SESSION Venue:
Adriatico Guest House, Lower Level 1, outside Lecture Halls

AAZOU, Safae
1) ELECTRICAL CHARACTERIZATION AND MODELING OF SOLAR CELLS
2) ANALYTICAL AND NUMERICAL RESOLUTION OF POISSON EQUATION IN NANOWIRE LIKE COAXIAL p-n JUNCTION SOLAR CELL

ABAZOVIC, Nadica D.
INFLUENCE OF SURFACE LIGAND ON $AgInSe_2$ CRYSTAL PHASE AND SIZE

AMOLO, George
MODELING MATERIALS FOR SOLAR ENERGY APPLICATIONS

BADAN NUNEZ, Juan A.
OPTICAL PROPERTIES OF SILICON NANOWIRE ARRAYS PREPARED BY ELECTROLESS METAL DEPOSITION

BHOSALE, Rajesh
NOVEL POLYHETEROACENE DERIVATIONS FOR OPTOELECTRONICS

CALZOLARI, Arrigo
ZOOMING IN AN EXCITONIC SOLAR CELL: AN AB INITIO INVESTIGATION OF THE OPTICALLY ACTIVE SITE

CAPPELLETTI, Marcelo A.
ENHANCED RADIATION HARDNESS OF Si-PIN SOLAR CELLS EXPOSED TO 10 MeV PROTON IRRADIATION

CARGNELLO, Matteo
SYNTHESIS OF DISPERSIBLE CORE-SHELL METAL@OXIDE MATERIALS AND THEIR APPLICATION AS STABLE FUEL CELL CATALYSTS

CHIKER, Fafa
CHALCOPYRITE SEMICONDUCTORS: NEW MATERIALS FOR SOLAR CELL ENERGY

CHOUDHARY, Sunil S.
TOWARDS THE SYNTHESIS OF CONGESTED TRIPHENYL AMINE DERIVATIVES

D'AVINO, Gabriele
THIN FILM GROWTH OF PENTACENE ON C_{60} (001) FROM VAPOR DEPOSITION SIMULATIONS

DATTA, Soumendu
FIRST PRINCIPLES STUDY OF STRUCTURE, ELECTRONIC PROPERTIES AND IMPURITY CHEMCIAL POTENTIAL EFFECT FOR N-DOPED ANATASE TiO_2.

DELGADO GRAN, Alain
LOW-LYING ELECTRONIC EXCITATIONS AND OPTICAL ABSORPTION SPECTRA OF THE BLACK DYE SENSITIZER: A FIRST-PRINCIPLES STUDY

DOUMA, Dick Hartmann
OPTICAL PROPERTIES OF DYE SENSITIZED TiO_2 NANOWIRES FROM TIME-DEPENDENT DENSITY FUNCTIONAL THEORY

EGBE, Daniel Ayuk Mbi
POLYMER-BASED ORGANIC SOLAR CELLS: TUNING OF ACTIVE LAYER NANOMORPHOLOGY AND ENHANCEMENT OF PHOTOVOLTAIC PERFORMANCE USING ALKOXY SIDE GROUPS

EL-MANSY, M. K.
CHARACTERIZATION OF PVA/CuI POLYMER COMPOSITE AS ELECTRON DONOR FOR PHOTOVOLTAIC APPLICATION

FORTUNELLI, Alessandro
A REACTIVE GLOBAL OPTIMIZATION APPROACH TO THE CATALYTIC REDUCTION OF CO_2 BY Ni SUPPORTED NANOCLUSTERS

GILIOLI, Edmondo
SOLUTIONS FOR CONTROLLING PARTICLE DEFECTS IN $CuIn_{1-x}Ga_xSe_2$ (THIN FILMS INDUCED BY PULSED ELECTRON DEPOSITION (PED) TECHNIQUE

GOMEZ LEON, Monica
HYDROTHERMAL SYNTHESIS OF Zn_2SnO_4 FOR SOLAR APPLICATIONS

GREGORATTI, Luca
EXPLORING THE MATERIAL BEHAVIOUR OF SOLID OXIDE FUEL CELLS WITH IN-SITU SPEM

HOSSEINI, Zahra
LUMINESCENT DOWN SHIFTING OF THE INCIDENT SPECTRUM TO ENHANCE THE PERFORMANCE OF DYE SENSITIZED SOLAR CELL

JAIN, Pushpendra K.
MATERIALS RESEARCH AT THE UNIVERSITY OF BOTSWANA

KHAMLICH, Saleh
Cr/α-Cr_2O_3 MONODISPERSED SPHERICAL CORE-SHELL PARTICLES BASED SOLAR ABSORBERS

LOMBARDO, Domenico
DENDRIMERS BASED NANOSTRUCTURES AS NOVEL MATERIALS FOR ADVANCED ENERGY TECHNOLOGIES

LUKOYANOV, Alexey
COMPUTATIONAL MODELING OF MATERIALS FOR ENERGY

MA, Changru
CATALYTIC WATER SPLITTING FOR HYDROGEN PRODUCTIION: A FIRST-PRINCIPLES STUDY OF A Ru COMPLEX IN SOLUTION

MAHAJAN, Aman
9,10-ANTHRAQUINONES BASED ORGANIC SEMICONDUCTING MATERIALS FOR PHOTOVOLTAIC APPLICATIONS

MATTONI, Alessandro
UNDERSTANDING THE MICROSTRUCTURE OF POLYMER-METALOXIDE HYBRID INTERFACES

MEMARIAN, Nafiseh and VOMIERO, Alberto
FABRICATION OF HIERARCHICALLY STRUCTURED ZnO PHOTOANODES FOR HIGHLY EFFICIENT DYE SENSITIZED SOLAR CELLS

MOHAMMADPOUR, Raheleh
INVESTIGATION ON THE DYNAMICS OF ELECTRON TRANSPORT AND RECOMBINATION IN NANOTUBULAR AND NANOPARTICULAR TiO_2 ELECTRODES FOR DYE SENSITIZED SOLAR CELLS

MORE, Sandeep P.
SYNTHESIS OF PYRENE-FUSED AZAACENES WITH ENHANCED SOLUBILITY

PALMA, Giuseppina
SOLAR CELL CHARACTERIZATION SET UP

PANDEY, Kamlesh
FERRITE BASED NANO COMPOSITE POLYMER ELECTROLYTE FOR THE NON CONVENTIONAL ENERGY SOURCES

PLODINEC, Milivoj
TEMPERATURE STABILITY OF SURFACE-MODIFIED TITANATE NANOTUBES

PRADHAN, Debabrata
ZnO NANOSTRUCTURED MATERIALS FOR SUNLIGHT-DRIVEN HYDROGEN GENERATION BY WATER PHOTOELECTROLYSIS

QUARTI, Claudio
THEORETICAL INVESTIGATION OF MULTI-EXCITON PROCESSES IN ORGANIC CRYSTALS: THE EFFECT OF CHEMICAL SUBSTITUTION

ROUABAH, Zahir
BACKSCATTERING COEFFICIENTS OF ELECTRONS AT LOW ENERGY IMPINGING ON BINARY SEMICONDUCTORS

ROZZI, Carlo Andrea
PHOTO-EXCITATION AND CHARGE-TRANSFER IN LIGHT-HARVESTING SUPRAMOLECULAR SYSTEMS

SAN, Sait Eren
THREE CASE STUDIES ON ORGANIC ELECTRONICS AND RENEWABLE ENERGY MATERIALS: 1-ZnO NANO-RODS BASED HYBRID SOLAR CELLS; 2-CONDUCTING POLYMER BASED ELECTROCHROMIC DEVICE AND 3-GEL BASED OFET

SCREMIN, Barbara
SIZE-ENERGY SHIFT TREND OF THE 144 cm^{-1} PHONON IN ASSEMBLED SUPERSTRUCTURES OF TiO_2 ANATASE (CYLINDRICAL) NANOCRYSTALS: A PROBE OF ARCHITECTURE HOSTING EFFICIENCY

SELLAI, Azzouz
SURFACE PLASMONS EXCITATION SCHEMES FOR EFFICIENCY ENHANCEMENT IN THIN FILM SOLAR CELLS

SLUNJSKI, Robert
QUANTUM DOT SUPERLATTICES AND HOW THEY OFFER PROSPECTS FOR THE NEW GENERATION OF SEMICONDUCTOR DEVICES

SONI, Saurabh
AN EFFICIENT, THERMOREVERSIBLE HYDROGEL BASED QUASI SOLID STATE DYE SENSITIZED SOLAR CELL

SORBELLO, Luca
DYESOL APPROACH TO DSSC: STATE OF THE ART AND FUTURE DEVELOPMENTS

SPASEVSKA, Hristina
PARAMETRIC STUDY OF THIN FILMS FOR $TiO_2/CuInS_2$ NANOCOMPOSITE SOLAR CELLS

STROPPA, Alessandro
THE SHORTCOMINGS OF SEMI-LOCAL AND HYBRID FUNCTIONALS: WHAT WE CAN LEARN FROM SURFACE SCIENCE STUDIES

TATEYAMA, Yoshitaka
ADSORPTION AND PHOTOEXITATION OF BLACK-DYE ON TIO_2 (101) SURFACE FOR DYE-SENSITIZED SOLAR CELLS

USLUER, Ozlem
ANTHRACENE-CONTAINING PPE-PPVs: SYNTHESIS, CHARACTERIZATION, PHOTOPHYSICAL, ELECTROCHEMICAL AND PHOTOVOLTAIC PROPERTIES

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WORKNEH, Getachew Adam
MOBILITY AND PHOTOVOLTAIC PERFORMANCE STUDIES ON POLYMER BLENDS: EFFECTS OF SIDE CHAINS VOLUME FRACTION

XU, Bin and DIAKHATE Momar
FIRST PRINCIPLES STUDY OF THERMOELECTRIC PROPERTIES IN SOLIDS ($SrTiO_3$ and $FeSb_3$)

YANG, LiWen
SILICON-NANOWIRE TEXTURED SURFACE ON COMMERCIAL SOLAR-GRADE MULTICRYSTALINE SILICON WAFER WITH EXCELLENT ANTIREFLECTION PROPERTIES

YANG, Quan-Hong
CARBON NANOSTRUCTURES AND MACROFORMS STARTING FROM GRAPHENES: CONTROLLED ASSEMBLY AND ELECTROCHEMICAL APPLICATIONS

YUMUSAK, Cigdem
NOVEL ORGANIC BULK HETEROJUNCTION SOLAR CELLS BASED ON POLY(*p*-Phenylene-Vinylene) DERIVATIVES