ANSOLE DAYS 2012 (17-19 February 2012)

"Solar Energy for Sustainable Development"

Venue: *Salle S01/02 du Bloc Pédagogique (Building in which DAAD Information Centre is located), University of Yaounde 1, Yaounde Cameroon*

Final Program

	Thursday 16.2.2012
14.00-18.00	**Registration**
	Friday, 17.2.2012
8.00-9.00	**Registration**
9.00-10.00	**Opening ceremony** **moderated by Prof. Dr. Jean Marie Ndjaka**
	Section A: Chemistry and Physics of Organic Solar Cells
	Chairman: Samir Romdhane
10.00-10.40	*Keynote Lecture 1* ***Material design for organic solar cells***, Daniel A. M. Egbe, Johannes Kepler University Linz, Austria
10.40-11.00	**Coffee Break**
11.00-11.40	*Keynote Lecture 2* ***Issues related to efficiency and stability in polymer based solar cells,*** Elizabeth von Hauff, University of Freiburg, Germany
11.40-12.00	**O1*: Dye-sensitized solar cell using natural dyes extracted from jiwene (acalypha wilkesiana) stem*,** Adenike Boyo O, Shitta , M.B.O, Oluwa K.O, Adeola O, Lagos State University, Ojo, Badagry Nigeria/ Federal university of Ado Ekiti, Osun, Nigeria
12.00-12.40	*Keynote Lecture 3* ***Imaging methods for quality control and degradation analysis of organic solar cells,*** Harald Hoppe, Gerhard Gobsch, Marco Seeland, Roland Rösch, Burhan Muhsin, Maik Bärenklau, Ilmenau University of Technology, Ilmenau, Germany
12.40-13.00	**CP1: *Matrix Power, Douala Cameroun,*** Serge Henri Kelbe
13.00-14.00	**Lunch Break**
	Section B: Modeling and Design of Solar Systems
	Chairman: Yao Azoumah
14.00-14.40	*Keynote lecture*:4 ***Computer simulation of structural and optical properties of a dye sensitized solar cell,*** Ralph Gebauer, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy
14.40-15.00	**O2: *Modelling with shrinkage of the Indirect solar drying kinetics of sheanut (Vitellaria Paradoxa Gaertn.) kernels,*** Divine Nde Pub, Charles Fon Abi, Dzudie Tenin, César Kapseu, Clergé Tchiengang, Zéphirin Mouloungui Higher Institute of the Sahel, University of Maroua, Cameroon/ ENS, University of Yaounde 1, Cameroon/ ENSAI, University of Ngaoundere, Cameroon/ Université de Toulouse, France.
15.00-15.20	**O3**: ***Structural properties of CdS_xTe_{1-x} under high pressure from ab initio calculations,*** A. Bouzid, Z. Rouabah, N. Bouarissa , University centre of Bordj Bou Arréridj, Algeria

15.20-15.40	**O4**: ***Electronic structure and optical properties of $Si_{1-x}Ge_x$,*** Z.Rouabah**,** A. Bouzid, N. Bouarissa, Centre Universitaire de Bordj-Bou-Arreridj, El-Anasser, Bordj-Bou-Arreridj, Algeria
15.40-16.00	**CP2: *DAAD in Cameroon,*** Katja Buchecker, University of Yaounde 1, Cameroon
16.00-16.20	**Coffee Break**
	Chairman: Ralph Gebauer
16.20-17.00	*Keynote Lecture 5:* ***Concentrating Solar Power Technologies,*** Bertrand.F. Tchanche, Université de Lorraine, Nancy, France
17.00-17.40	*Keynote lecture 6:* ***Hybrid systems for a sustainable electricity generation: the flexy-energy concept***, Yao Azoumah, D. Yamegueu, X. Py , LESEE-2iE, Institut International d'Ingénierie de l'Eau et de l'Environnement, Ouagadougou, Burkina Faso/ Laboratoire Procédés Matériaux et Energie Solaire, Université de Perpignan, France
17.40-18.00	**O5*: Methodology to design a food stuffs solar drier***, Yacoub I. Halawlaw, University of Djamena, Chad
18.00-20.00	***GENERAL ASSEMBLY OF ANSOLE***
	Saturday, 18.2.2012
	Section C: Physics of semiconducting solar cells
	Chairman: Martin Kamta
9.00-9.40	*Keynote lecture 7:* ***Charge transport in bulk-heterojunction solar cells,*** Nadia Camaioni, Consiglio Nazionale delle Ricerche, Bologna Italy
9.40-10.00	**O6*: Qualitative, Optical and Structural Characterization of Titanium Oxide Thin Film Prepared by sol-gel Dip coating Method*,** Aderemi B. Alabi, Babalola Olayinka A University of Ilorin, Ilorin, Nigeria
10.00-10.40	*Keynote lecture 8:* ***Correlations between Photovoltaic Solar Cell Technologies parameters and their performances in various Applications,*** O. Savadgo, École Polytechnique de Montréal, Canada
10.40-11.00	**O7: *Quantum dots and intermediates band solar cell,*** A. Mmadi, I. Zorkani, K. Rahmani , A. Jorio, Faculté des sciences Dhar Mehraz, Université de Fes, Morocco
11.00-11.20	**Coffee Break**
	Chairman: Oumarou Savadogo
11.20-11.40	**08*:Inorganic Materials properties for hybrid photovoltaic cells*,** Nmaamar Hakiki, LCP laboratory, university of Oran, Algeria
11.40-12.00	**O9*: EXAFS study of thermal expansion in Cadmium Selenide compound*,** Bridinette Fandio, University de Yaoundé 1 and Université des Montagnes, Bangangté, Cameroon
12.00-12.20	**CP3: *SolarValley Mitteldeutschland – The leading photovoltaic region in the world*** Daniel A. M. Egbe, Gerhard Gobsch, Peter Frey, Hubert Aulich, ANSOLE Germany e.V, Jena Germany/ Ilmenau University of Technology, Ilmenau, Germany/SolarValley Mitteldeutschland GmbH, Erfurt, Germany
12.20-12.40	**NC: *Solar cell quality control by both recombination and electrical parameters determination: Application to a vertical parallel multifunction silicon solar cell,*** George Sissoko, University Cheik Anta Diop of Dakar, Senegal

12.20-12.40	
12.40-12.50	**CP4**: ***Yandalux GmbH, Hamburg Germany***, Alexander Sipua Ngnoubamdjum
12.50-13.00	**CP5: *Antaris Solar GmbH- Solair Afric Sarl, Yaounde Cameroon*** Noa Simeon
13.00-14.20	**Lunch Break**
	Section D: Solar Energy Technologies for Sustainable Development
	Chairman: Cesar Kapseu
14.20-15.00	*Keynote lecture 9:* ***The Solar Bottle and Solar Fountain: An educational tool for creating awareness of energy management,*** Mark Vervaart, CEA/INES R.D.I., Laboratory for Solar Systems (L2S), Le Bourget-du-lac, France
15.00-15.20	**O10*: Quantification of aerosol requirements for forecasts of electricity production by concentrating solar systems,*** Armel Oumbe, Total Gas & Power, R&D – Concentrated Solar Technologies, France
15.20-15.40	**O11: Rural Electrification in Cameroon -Lessons learned from 4 years of projects**, Paul Ngwe Mbeleg, Tobias Klaus,*International Solar Energy Research Center Konstanz e.V., Konstanz; Germany. Email*
15.40-16.00	**O12: *Thermal efficiency and durability of Box Type Solar Cookers in India: An Experimental study***, Rajkumar Sekaran, M. Rajesh Kumar, R. V. Jeba Rajasekhar, A. Sundaram, Tennyson Daniel, , Madurai Kamaraj University, India/, Government Arts College, Melur, India
16.00-16.20	**O13*: Investigation of the solar energy technology in South Africa,*** Silas K Mulaudzi, Mammo Muchie, Energy and Electricity Division, City of Tshwane, Pretoria, South Africa/ Tshwane University of Technology, Pretoria, South Africa
16.20-16.40	**O14: *Solar energy sustainability in Central Africa: Cameroon case study,*** Joseph Kenfack, Antoine Amie Assouh, Oumarou Hamandjoda, , Dieudonné Kidmo Kaga, , Blaise Biniom, Médard Fogue., National Advanced School of Engineering, Yaounde, Cameroon/University of Douala , Cameroon/ Electricity Sector Regulatory Agency (ARSEL) Yaounde, Cameroon/Institut du Supérieur du Sahel, University of Maroua Cameroon/IUT Bandjoun, Cameroon/University of Dschang, Cameroon
16.40-17.00	**Coffee Break**
	Posters Session
	Poster award committee: Mark Vervaart, Harald Hoppe, Nadia Camaioni, Elizabeth von Hauff
17.00-18.00	**P1. *Improvement of the yield of a photovoltaic systemby the approach based on the electrical load parameters,*** A. Dandoussou, M. Kamta, E. T. Houdji, B. Late, University of Ngaoundéré , Cameroon/University of Maroua, Cameroon **P2**. ***Mobility and Photovoltaic Performance Studies on Polymer Blends: Effects of Side Chains Volume Fraction.*** G. Adam, A. Pivrikas, A. Montaigne, S.Tadesse, T. Yohannes, N. S. Sariciftci, D. A. M. Egbe, Johannes Kepler University Linz, Austria. /University of Addis Ababa, Ethiopia.

P3. ***Vanadium Dioxide based nanophotonics*****,** A. Simo, R. Madjoe, J. M. B. Ndjaka, S. Zekeng, M. Maaza, Nanosciences African Network, Nanoscience Laboratories, Materials Research, Somerset West 7129, South Africa/ University of Yaounde 1/University of Western Cape, Belleville, South Africa.

P4. Experimental investigation of CPC with flat one-sided absorber: Energy and Exergy analyses, C.V. Aloyem Kaze, R. Tchinda, E. Mbaka Nfah. University of Dschang, Cameroon/ IUT-FV Bandjoun, Cameroon.

P5. ***Optical properties of catechol and Alizarin dye TiO_2 nanowires from time-dependent density functional theory***, B. M'Passi-Mabiala, H.D. Douma, R. Gebauer *Université Marien* Ngouabi, Brazzaviile, Congo/UR-MATER, DGRST, Brazzaville, Congo/Centre de Physique atomique et d'Optique quantique, Douala, Cameroon/The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy/ CNR-IOM DEMOCRITOS Simulation Center, Trieste, Italy.

P6. ***Comparative study of power supply systems for Relay stations of telecommunications in the northern area of Cameroon: case of the photovoltaic system and the generator group,*** Bello P. Ngoussandou, University of Maroua, Cameroon.

P7. ***Efficient p-i-n Structure Organic Photovoltaic Devices with Conversion Efficiency of 2.3%,*** D. Gebeyehu, University of Addis Ababa, Addis Ababa, Ethiopia.

P8. ***Experimental performance of a solar biomass briquette drier,*** D. M. Madyira, T. E. Ragalavhanda, E. T. Akinlabi, University of Johannesburg, Auckland Park Kingsway Campus, Johannesburg, South Africa.

P9. ***High quality nanostructure solar cell materials by low cost technique,*** Fawzy Hameed, National Research Center, Dokki, Giza, Egypt.

P10. ***Thermomechanical characteristic Briquettes and chemical energy based plant household waste***, Y. Jiokap, I. Samonssa, K. Richard, University of Ngaoundéré, Cameroon.

P11. ***Transient study of silicon solar cell under pulsed electric excitation: Determination of recombination parameters,*** I. Zerbo, R. Sam, M. Zoungrana , A. D. Seré, A. T. Kam, F. Zougmoré, University of Ouagadougou, Burkina Faso/ Polytechnic University of Bobo Dioulasso, Burkina Faso

P12. ***Alimentation des sites isolés en Energie Solaire : cas des campements et des hôtels de tourisme au Cameroun,*** **C.** Kapseu, C. A. Koueni Toko, M. Kombi, A. Ahmed, Ecole Nationale Supérieure des Sciences Agro-industrielles, Université de Ngaoundéré - Cameroun / Ministère du Tourisme Yaoundé, Cameroun / Institut Universitaire de Technologie, Université de Ngaoundéré, Cameroun

P13. ***Software tool support for simulation of a photovoltaic system running on a hot and dry climate*****,** B.Laté, A. Dandoussou, M. Kamta, R. Tchinda**,** Université de Dschang, Dschang, Cameroun/Université de Ngaoundéré, Ngaoundéré, Cameroun.

P14. ***3D modelling of grains sizes and grains boundaries effects on polycristalline***

silicon solar cell electric parameters: series resistance, shunt resistance and junction capacity, M. Zoungrana, I. Zerbo, B. Zouma, A.D. Seré, F. Zougmoré, Université de Ouagadougou, Burkina Faso/ Université Polytechnique de Bobo Dioulasso, Burkina Faso.

P15. ***Thermal characterization of a sensor solar plane low temperature*****,** E. Mbou Tiaya, A. Kemajou, University of Douala, Cameroon

P16. ***Optical characterization of conducting materials applied in photovoltaic cells*****,** A. Bakhouche, M.Bouafia, G.Gobsch, University of Sétif, Applied optics Laboratory, Algeria/- Technical University Ilmenau, Germany.

P17. Effect of moisture content of canarium fruit (*Canarium schweinfurthii) on texture pulp: Application to pulp dehydration* , G. B. Nkouam, C. Kapseu, D. Barth, M. Dirand, The Higher Institute of the Sahel, University of Maroua, Cameroon/, ENSAI-University of Ngaoundere, Cameroon/ UPR CNRS 3349 ENSIC-INPL, Nancy Cedex, France.

P18. ***Solar technologies for buildings*****,** N. Djongyang, R. Tchinda, C. Kapseu, Faculty of Science, University of Ngaoundere, Cameroon/IUT Fotso Victor, Bandjoun, Cameroon/ University of Dschang, Cameroon/ ENSAI, University of Ngaoundere, Cameroon

P19. ***Sesamum indicum L: A potential source for the production of biodiesel***, S. N. Nouadjep, C. Kapseu, E. Nso, University of Ngaoundere, Ngaoundere, Cameroon.

P20. ***Solar energy for small scale safe drinking water provision***, C. Noubactep, E. Temgoua, University of Göttingen, Germany/University of Dschang, Cameroon.

P21. ***Three dimensional approach of spectral response for polycrystalline vertical junction silicon solar cell***, G. Sissoko, Z. Nouhou Bako, Université Cheikh Anta Diop, Dakar, Sénégal/Université de Maradi, Niger.

P22. ***Biogas Production by co-digestion of banana peelings and Pig Manure*****,** E. J. Nso, D. C. Feudjio, C. Kapseu, Université de Ngaoundéré, Cameroun.

P23. ***Optical properties of MEH-PPV and MEH-PPV/ [6,6]-Phenyl C61-butyric Acid 3-ethylthiophene Ester thin films*****,** B. M. Omer, A. K. Mohamed, Omdurman Ahlia University, Omdurman, Sudan.

P24. ***Design, simulation and realization of an intelligent charge controller for accumulators in renewable energy power stations***, P. D. Dongo, C. T. Tchito, R. Tchitnga, A. R. Tchamda, J. T. Kewir, A. Fomethe, University of Dschang, Cameroon.

P25. ***Renewable energy production from algae: Spirulina*****,** Y. Jiokap, P. Kouteu, C. Kapseu, University of Ngaoundéré, Cameroon.

P26. ***Determination of criteria for the choice of photovoltaic cells***, A. D. Pene, C. Kapseu, L. Bitjoka, G. E. Nkeng, D. A. M. Egbe, University of Ngaoundere, Cameroon/ Ecole Nationale Supérieure des Travaux Publics, Yaounde, Cameroon/ Johannes Kepler University Linz, Austria.

P27. ***Correlation between emission spectrum and diffusion rate using Franck-***

	Condon analysis in Solar Cell Polymers*,** M. A. Saidani, Ö. Usluer, Z. Ben Hamed, A. Ben Fredj, F. Kouki, S. Romdhane, D. A.M. Egbe , H. Bouchriha, University of Tunis, Tunisia/ Johannes Kepler University Linz, Austria/ University of Bizerte, Tunisia **P28. *Eigen modes of a wind turbine wooden blade*,** S. Touré, R. Kalou, B. Troh, University of Cocody, Abidjan, Côte d'Ivoire. **P29**. ***Hybrid Solar-Wind Water pumping analysis in Korhogo (Côte d'Ivoire), S. Touré, D. Traoré, University of Cocody, Abidjan, Côte d'Ivoire. **P30**. ***Natural Dye sensitized Solar Cells using Pigments Extracted from Syzygium guineense,*** S. Tadesse, A. Abebe, Y. Chebude, I. V. Garcia, T. Yohannes University of Addis Ababa, Ethiopia. **P31. *Characterization of the Solar Climate in Malawi Using NASA's SSE Model,*** T.C. Senganimalunje, *University of Malawi, Malawi* **P32. *Use of Indium oxide doped tin ITO as anode for the organic solar cells, improvement of performances by the optimisation of the interface anode/electron donor.*** M. Makha**,** M. Addou, J. C. Bernede**,** University of Kenitra, Morocco/ University of Angers, France/ University of Nantes, France **P33. *Dye-sensitized solar cells*,** S. M. Waita, University of Nairobi, Kenya **P34**. ***Synthesis of functional organic materials based on tetrafulvalene (TTF) for optoelectronic devices***, L. Boudiba, S. Boudiba, H. Douib, A. Gouasmia, University of Tebessa, Algeria **P35**. ***On the influence of the exciton-blocking layer on the organic multilayer cells properties,*** Yapi, A. S., Toumi, L., Lare, Y., Soto, G. M., Cattin, L., Toubal, K., Djafri, A., Morsli, M. Khelil, A., Del Valle, M. A. and Bernède, J.-C. Université de Cocody Abidjan, Côte d'Ivoire/ Université de Oran Es-Sénia, , Oran, Algeria/ Université de Lomé, Togo/ Laboratorio de Polímeros, Facultad de Química, Santiago, Chile/ Université de Nantes,Nantes, France
19.00-22.00	**Conference Dinner** ***DAAD-sponsored cultural event: "No bills with the Sun"*** ***coordinated by Emelda Ngufor Samba***
	Sunday, 19.2.2012
	Section D: Solar Energy Technologies for Sustainable Development **Section E: Assessment of Promoting Factors for Solar Applications**
	Chairman: Bertrand Tchanche
8.30-9.00	*Keynote lecture 10:* ***Converting Research Results in Solar Energy into Innovation: Ideas and Experiments in Strengthening the African Solar Energy Network*,** Mammo Muchie, Tshawne University of Technology, Pretoria, South Africa
9.00-9.40	*Keynote lecture 11:* ***Assessment of solar radiation over Africa: present and future*,** Lucien Wald, MINES ParisTech, Centre Energétique et Procédés, Sophia Antipolis cedex, France
9.40-10.00	**O15:*Estimating hourly global solar radiation from satellite images,*** N. E. Erusiafe Michael Chendo, University of Lagos, Akoka, Lagos Nigeria

10.00-10.20	**O16:** ***The Status of Solar Photovoltaic and Solar Thermal Applications in Malawi,*** Chifundo Tenthani, T. Senganimalunje ., E. Phiri, The Malawi Polytechnic, Blantyre, Malawi/ The University of Malawi, Zomba, Malawi.
10.20-10.40	**O17:** ***Design and preliminary test results of three wind turbine battery chargers in Côte d'Ivoire,*** Siaka Touré, Diakaridja Traoré, Laboratoire d'Energie Solaire Université de Cocody, Abidjan, Côte d'Ivoire
10.40-11.00	**O18:** ***Evaluation of Direct Normal Radiation towards Solar Concentrators in Tropical Africa,*** Casimir Museruka, Charles Kabiri Alphonse Ngendahimana National Institute of Scientific Research and Technology, Butare, Huye Rwanda/ National University of Rwanda, Butare Rwanda/Development Bank of Rwanda ,Kigali
11.00-11.15	**Coffee Break**
	Chairman: Joseph Kenfack
11.15-11.30	**O19:** ***Situation of renewable energies in the Central Africa region: the case of solar energy,*** Cesar Kapseu, Noël Djongyang , Mathurin Petsoko, University of Ngaoundéré, Cameroon
11.30-11.45	**O20:** ***Wind energy potential in Sahel,*** Saïdou Madougou, Frederique Said, Bernard Campistron, Université Abdou Moumouni de Niamey Niger/Université de Toulouse, France
11.45-12.00	**O21: Study of the relation between banks and producers of renewable energies goods**, Aliou Dewa Bassirou, University of Ngaoundere, Cameroon
12.00-12.15	**O22:** ***Sustainable energies for rural development in sub-shahara africa: Interdisciplinary approach and organisational challenge,*** Marthe Njuikom, Forum des Energies Renouvelables pour le Développement Durable et la Solidarité Internationale (FERDEDSI), KR Alkmaar, The Netherlands
12.15-12.30	**O23***: Country experiences: Solar radiation climatology in Côte d'Ivoire Technique of implementing a station of solar radiation and meteoclimatic parameters measure for establishing a West African Solar Radiation Atlas,* Yao N'Goran, Kouakou Konan Université de Cocody, Abidjan, Côte d'Ivoire/ *Institut National Polytechnique Félix Houphouet-Boigny (INP-HB), Yamoussoukro, Côte d'Ivoire,*
12.30-12.45	**O24***: Solar drying of sludge,* Thomas Nyanga, Université de Toulouse, France
12.45-13.00	**O25***: Electricity storage for PV energy: technological evolutions in stand-alone and grid-connected systems,* Mark Vervaart, Marion Perrin, CEA/INES R.D.I., Laboratory for Solar Systems (L2S) Le Bourget-du-lac, France
13.00-14.00	**Closing Ceremony (Awards!)**
14.00-16.00	**DAAD-Alumni meeting**