''International Symposium on Physics of Energy Storage and Ferroic Materials (ISPESFM)''

# The ISPESFM program

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| **Wednesday, October 21, 2026** | | |
| 18:00 - 19:00 | **Registration of the participants (Université de Cocody, LabTech)**<br>**Welcome cocktail** | |
| **Thursday, October 22, 2026** | | |
| **Chairman : ADOU Serge** | | |
| 08:00 - 09:00 | **Registration (Conference Room, ENSEA)** | |
| **Time** | **Communication** | **Speakers** |
| 09:00 - 09:40 | **Opening Ceremony** | **PROTOCOL, WELCOME SPEECHES**<br>**- Pr GAGOU Yaovi**<br>President Organizing Committee<br>**- Pr BALLO Zié**<br>Welcome address by the President of UFHB<br>**- Pr DIAWARA Adama**<br>Minister of Higher Education and Scientific Research |
| **Chairman : Pr SAINT-GREGOIRE Pierre** | | |
| 09:40 - 10:20 | **PLENARY CONFERENCE 1**<br>La production d'énergie électrique en Afrique : quel mix énergétique pays pour la transition énergétique ? | **Pr AKA Boko**<br>Directeur de l'IREN<br>Président régional du RESER<br>Abidjan (Côte d'Ivoire) |
| 10:20- 10 :50 | **Coffee break** | |
| 10:50 - 11:10 | **Conference 1**<br>Energy Transition Governance in Benin: A Decade of Institutional Reform and Policy Implementation (2016-2026) | **DRAMANE Gado D. A.**<br>LSNA, ENS-Natitingou<br>Université de Natitingou<br>Natitingou (Benin) |
| 11:10 - 11:30 | **Conference 2**<br>Conception et gestion intelligente de l'énergie d'un système hydroélectrique en boucle fermée pour la production continue d'énergie industrielle | **MELEDJE C. Désiré**<br>Université NANGUI ABROGOUA (UNA)<br>Abidjan (Côte d'Ivoire) |
| 11:30 - 11:50 | **Conference 3**<br>Mapping and estimating Global Horizontal Irradiance (GHI) resources in Côte d'Ivoire | **NAVOUNGASSOROU Soro W.**<br>Université Félix Houphouet Boigny (UFHB)<br>Abidjan (Côte d'Ivoire) |
| 11:50 - 14:00 | **Lunch** | |

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| **Chairman : Pr AKA Gérard** | | |
| 14:00 - 14:30 | **PLENARY CONFERENCE 2**<br>Electrocaloric Effect and Energy Storage in Ferroic Materials | **Pr GAGOU Yaovi**<br>Université de Picardie Jules Verne (UPJV)<br>LPMC<br>Amiens (France) |
| 14:30 - 14:50 | **Conference 4**<br>Spatial Feasibility Study for Electric Vehicle Charging Infrastructure along the Abidjan-Yamoussoukro Corridor<br>using GIS and Multicriteria Analysis | **ABDUL NASSER Raouf**<br>UFHB /Lab-Tech, UFR SSMT<br>Abidjan (Côte d'Ivoire) |
| 14:50 - 15:10 | **Conference 5**<br>Natural dye derived from Anacardium occidentale for dye-sensitized solar cells using Gd2Ru2O7 pyrochlore structure | **KRAIDY Fulgence**<br>Université de Picardie Jules Verne (UPJV)<br>LPMC<br>Amiens (France) |
| 15:10 - 15:30 | **Conference 6**<br>Machine learning-based weekly electricity consumption modelling under meteorological variability and population growth: Evidence from a West African city | **ABI Mindénèsso**<br>CERME<br>Université de Lomé<br>Lomé (Togo) |
| 15:30 - 15:50 | **Conference 7**<br>From research to start-up | **SAINT-GREGOIRE Eugène**<br>Dama & Co AVOCAT<br>Paris (France) |
| 15:50 - 16:20 | **Coffee break** | |
| **Chairman : Dr ABDUL NASSER Raouf** | | |
| 16:20 - 16:40 | **Conference 8**<br>Identification and Characterization of a Persistent Ultra-Low-Frequency Oscillation on a Real West African Power Pool Interconnection: Field Measurements and Small-Signal Analysis | **NENE Franck Didier**<br>Laboratoire de Technologies<br>Lab'Tech<br>Université Félix Houphouet Boigny,<br>Abidjan (Côte d'Ivoire) |
| 16:40 -17:00 | **Conference 9**<br>"Ferroelectric Nanoparticle-Doped Liquid Crystals: Landau Modeling for the Optimization of Energy-Efficient Functional Materials" | **LOGBO Harrod**<br>Ecole Nationale Supérieure de Génie Energétique et Procédés (UNSTIM)<br>Université de Natitingou<br>Natitingou (Benin) |
| 17:00 -17:20 | **Conference 10**<br>Lead-Free Piezoelectric Polymer Nanocomposites for Flexible and Energy-Autonomous Healthcare Sensors | **LAHMAR Abdelilah**<br>Université de Picardie Jules Verne (UPJV)<br>LPMC<br>Amiens (France) |
| 17:20 -17:40 | **Conference 11**<br>Global characterization of solar panels by Gabor filters with texture descriptors for semi-automatic identification of recyclable solar modules. | **GUIE TOA BI Théodore**<br>University of Man<br>Dept de Physique<br>Man (Côte d'Ivoire) |
| 17:40 -18:00 | **Conference 12**<br>Unveiling the Nanoelectronic Potential of HH-rGY: A Multiscale Study of a Novel 2D Semiconductor | **SODOGA Komi**<br>Laboratoire de Physique des Matériaux et Des Composants à Semi-Conducteurs (LPMCS) Université de Lomé, Togo |
| 20:00 - 23 :55 | **Gala dinner** | |

| Friday, October 23, 2026 | | |
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| **Chairman : Pr GAGOU Yaovi** | | |
| **Time** | **Communication** | **Speaker** |
| **09:00 - 09:40** | **PLENARY CONFERENCE 3**<br>Megajoule Laser Generation for a Wide Range of Applications | **Pr AKA Gérard**<br>Directeur Adjoint de IRCP<br>Paris (France) |
| **09:40 -10:00** | **Conference 13**<br>Energy efficiency in the hotel industry: the case of laundry drying | **KOFFI Aka Stéphane**<br>UFR SSMT, Technology Laboratory<br>UFHB, Abidjan, Côte d'Ivoire |
| **10:00 - 10:20** | **Conference 14**<br>Comparative study of semiconductor materials (Si, SiC, GaN) for photovoltaic system power converters | **KOUASSI Désiré Kakou**<br>UFR-SSMT LabTech<br>Université Félix Houphouet Boigny<br>Abidjan (Côte d'Ivoire) |
| **10:20 - 10:40** | **Conference 15**<br>Global characterization of solar panels by Gabor filters with texture descriptors for semi-automatic identification of recyclable solar modules | **Guié Toa Bi Théodore**<br>University of Man<br>Abidjan (Côte d'Ivoire) |
| **10:40 – 11:10** | **Coffee break** | |
| **Chairman : Pr LANG Philippe** | | |
| **11:10 - 11:30** | **Conference 16**<br>Etude de la caustique du receveur tubulaire d'un capteur solaire a concentration linéaire | **PAKOUZOU B. Magloire**<br>Laboratoire d'Energétique Carnot,<br>Université de Bangui,<br>Bangui (Centrafrique) |
| **11:30 – 11:50** | **Conference 17**<br>Bode and Nyquist Diagrams of the Diffusion Coefficient of Excess Minority Carriers in the Base of a Silicon Photovoltaic Cell Under Magnetic Field | **BOIRO Mountaga**<br>Laboratoire de Semi-conducteurs et d'Energie Solaire<br>Université Cheikh Anta DIOP<br>Dakar (Sénégal) |
| **11:50 – 12:10** | **Conference 18**<br>Performance Characteristics of Diesel Engine Fuelled with Cashew Nut Shell Liquid blended with Acetone-Butanol-Ethanol (ABE (361)) | **SABBA Gwoda**<br>Laboratoire Energies Renouvelables et Efficacité Energétique (LabEREE)<br>Ouagadougou (Burkina Faso) |
| **12:10 – 12:30** | **Conference 19**<br>In static regime conditions and under temperature, a monofacial silicon solar cell with low absorption coefficients on its emitter: a space charge region study through capacitance | **DIATTA Ibrahima**<br>International Renewable Energy Research Group (GIRER)<br>Dakar (Sénégal) |
| **12:30 - 12:50** | **Conference 20**<br>Solubility limit of $sr^{2+}$ and $SrBr_2$ segregation in $MAPb_{1-x}Sr_xBr_3$ thin films: structural, morphological and photoluminescence consequences | **CAMARA Abdoulaye**<br>Instituto de Diseño y Fabricación (IDF)<br>Universidad Politècnica de València (UPV)<br>Valencia (Spain) |
| **12:50 – 14:00** | **Lunch** | |

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| **Chairman : Pr YAPI Abé** | | |
| **14:00 - 14:40** | **PLENARY CONFERENCE 4**<br>Unlocking the potential of the insulator–metal transition for photocatalysis | **Pr GRANDIDIER Bruno**<br>IEMN<br>Lille (France) |
| **14:40 - 15:00** | **Conference 21**<br>Effect of MgO Residues on the Dry-band Arcing Erosion on Silicone Rubber Filled with Magnesium Hydroxide | **KONE Daouda**<br>Université Félix Houphouët-Boigny (UFHB)<br>Abidjan (Côte d'Ivoire) |
| **15:00 - 15:20** | **Conference 22**<br>Experimentally study of the thermal behavior of a heat storage system during the cocoa beans drying | **ABOUANOU N'Dri Emmanuel**<br>UFR SSMT<br>Université Félix Houphouët Boigny (HFHB)<br>Abidjan (Côte d'Ivoire) |
| **15:20 - 15:40** | **Conference 23**<br>First-Principles Study of $C_{12}$-GR and $C_{16}$-GY Carbon Allotropes for Nanocapacitor Applications | **SODOGA Komi**<br>Laboratoire de Physique des Matériaux et Des Composants à Semi-Conducteurs (LPMCS) Université de Lomé (Togo) |
| **15:40 - 16:00** | **Conference 24**<br>Numerical study of a piezoelectric energy harvester | **NICOUE Hermann Désiré**<br>CERME<br>Université de Lomé<br>Lomé (Togo) |
| **16:00 - 16:30** | **Coffee break** | |
| **Chairman : ADOU Serge** | | |
| **16:30 - 17:10** | **PLENARY CONFERENCE 5**<br>Iron–Air Batteries for Long-Duration Storage in Africa: Technical Challenges and Pathways to Deployment | **Pr SAINT-GREGOIRE Pierre**<br>President de ONG Collaborating Academics<br>Montpellier (France) |
| **17:10 - 17:30** | **Conference 25**<br>"Evaluation of the Economic Performance of a Vegetated Concrete *Slab Roof in Sub-Saharan Africa: Experimentation with a Local Species in Northern Togo" | **BATAKA Batanta**<br>Laboratoire Matériaux, Energies Renouvelable et Environnement (LaMERE)<br>Université de Kara<br>Kara (Togo) |
| **17:30 - 17:50** | **Conference 26**<br>Ferroelectric, Electrocaloric, Optical and shift current Properties of $BaTiO_3$: A Quantum-Geometrical Approach via Wannier Frameworks | **BELBOUKHARI Aimad**<br>LIRBEM Lab, ENS-Marrakech<br>Université Cadi Ayyad<br>Marrakech (Maroc) |
| **17:50 - 18:10** | **Conference 27**<br>AI-Smart Recycling for Renewable Energy Equipment Waste Management in Togo | **WALLA Essowedong**<br>Laboratory of Materials and Semiconductor Components Physics (LPMCS) - CERME<br>Université de Lomé<br>Lomé (Togo) |
| **18:10 - 18:30** | **Conference 28**<br>Couplage terres rares-plasmons entre des ions $Tb^{3+}$ et des structures plasmoniques d'argent (Ag) au sein d'une architecture multicouches $Y_2O_3$:$Tb^{3+}$/$Y_2O_3$/Ag | **SOW Mohamed Sherif**<br>Département Energie Photovoltaïque<br>Université de Labé<br>Conakry (Guinée) |
| **Chairman : Pr SAINT-GREGOIRE Pierre** | | |
| **18:30 - 19:30** | **Round Table**<br>Laboratory Instrumentation in Africa: Challenges and Opportunities for Scientific Development | |

| Saturday, October 24, 2026 | | |
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| **Chairman : Pr LAHMAR Abdelilah** | | |
| **Time** | **Communication** | **Speaker** |
| **09:00 - 09:40** | **PLENARY CONFERENCE 6**<br>An interface-engineering approach to the initial performance and long-term stability of emerging photovoltaics: from indoor organic bulk-heterojunction to p-i-n hybrid perovskite solar cells | **Pr LANG Philippe**<br>CNRS, ITODYS, UMR 7086<br>Université Paris Cité<br>Paris (France) |
| **09:40 - 10:00** | **Conference 29**<br>Innovative Materials for Energy Efficiency: Designing Ultra-Low-Power Spintronic Devices via Iron-Doping of 2D Oxides | **KANGA N'Goyé Bré-Junior**<br>Université de Man<br>Man (Côte d'Ivoire) |
| **10:00 - 10:20** | **Conference 30**<br>Isovalent substitution of $Pb^{2+}$ by $Sr^{2+}$ and $Mg^{2+}$ in $MAPbBr_3$: comparative effects on the structural and optoelectronic properties of thin films | **CAMARA Abdoulaye**<br>Instituto de Diseño y Fabricación (IDF)<br>Universidad Politècnica de València (UPV)<br>Valencia (Spain) |
| **10:20 - 10:40** | **Conference 31**<br>Influence of Slag Concentration on the Optical and Structural Properties of 50Na2O-50B2O3 Glass System | **KHATTAB Kawtar**<br>Materials Science Research Center (CSM),<br>Ecole Normale Supérieure<br>Rabat (Maroc) |
| **10:40 - 11:00** | **Coffee break** | |
| **Chairman : Dr LOGBO Harrod** | | |
| **11:00 - 11:20** | **Conference 32**<br>Tailoring the Electronic Structure of Defect-Engineered Ruddlesden-Popper Oxides for Efficient Bifunctional Electrochemical Water Splitting | **ABDELNABI I. Saadallah**<br>Physics Department, Faculty of Science<br>Beni-Suef University<br>Beni-Suef (Egypt) |
| **11:20 - 11:40** | **Conference 33**<br>Photoelectrochemical Performance of Electrodeposited 1T/2H–$MoS_2$ Quantum Dots for Hydrogen Evolution | **ASBANI Bouchra**<br>LPMC<br>Université de Picardie Jules Verne<br>Amiens (France) |
| **11:40 - 12:00** | **Conference 34**<br>Study of Optical Properties of Lead-Free Layered Ruddlesden–Popper EA2CuCl4 Hybrid Perovskite for Photovoltaic Applications | **GUESSOUM Sabrina**<br>Laboratory of Physico-Chemical of Materials and Catalyse<br>Université de Bejaia<br>Bejaia (Algerie) |
| **12:00 - 12:20** | **Conference 35**<br>Extension of $Sr^{2+}$ substitution at the $Pb^{2+}$ site in $FAPbBr_3$ and $FA_{0.6}MA_{0.4}PbBr_3$ perovskites: influence on crystal structure and optical properties | **CAMARA Abdoulaye**<br>Instituto de Diseño y Fabricación (IDF)<br>Universidad Politècnica de València (UPV)<br>Valencia (Spain) |
| **12:20 – 12:40** | **Conference 36**<br>ZnO Nanorods Covered with CdTe Nanocrystals | **BADECHE Toufik**<br>Université du Sud Toulon Var (USTV)<br>Marseille (France) |
| **12:40 - 12:50** | **Closing conference** | |
| **12:50 - 13:50** | **Lunch** | |
| **14h** | **Departure of participants** | |