

## INTRODUCTION

Energy storage is widely used in many applications in the spheres of practical life and technology uses. As we are continuing to acquire these new energy storage technologies and their utilities, there is an increased demand for the enhancement of the performance metrics of all storage devices. This includes a high life-cycle, depth of discharge improvement, conventional uses, power and energy density, a wide operating temperature range and reduced cost while improving the safety and reliability of the systems. In this conference we have invited global experts and leaders to discuss the progress and future outlook in their respective technologies of focus. The objective of the conference is to encourage the sharing of knowledge and ideas from related fields in order to promote innovation, a scientific attitude towards growth and practical development, and modelling of energy storage.

LE STUDIUM  
LECTURES  
TOURS | 2016

**ENTRÉE LIBRE**

8 Septembre 2016 - 18h30  
**L'énergie disponible à tout moment : produire, économiser, stocker**

Hôtel de Ville  
Salle des Mariages  
Boulevard Heurteloup  
37000 Tours

**INTERVENANT**  
**Anne De Guibert**  
Directrice de la recherche, SAFT

Cette lecture publique est organisée dans le cadre de la conférence : Future strategies in electrochemical technologies for efficient energy utilisation

**INFORMATIONS**  
lecture@lestudium-ias.fr  
www.lestudium-ias.fr

LE STUDIUM  
Centre-Val de Loire  
C2S  
Anton Paar  
S2S2

## 7 SEPTEMBER 2016

### SESSION 1

- 08H00** Shuttle departure from Tours to Domaine de la Tortinière
- 08H30** Welcome coffee & Registration
- 09H00** Opening  
Serge Dufort (Director of CEA Le Ripault)  
Pr Daniel Alquier (Vice-president of Partnerships and Innovations of University François Rabelais of Tours)  
LE STUDIUM
- 09H50** **Pr Tsuyoshi Nakagima**  
Application of Fluorinated Materials to Lithium Batteries
- 10H30** Coffee break – Posters session

### SESSION 2: CHAIRMAN DANIEL LEMORDANT

- 11H00** **Dr Rachid Yazami**  
Lithium ion batteries for future energy storage
- 11H40** **Dr Matjaz Kozelj**  
Safe Li ion battery and beyond for energy storage and EVs
- 12H20** Lunch

### SESSION 3: CHAIRMAN FRANÇOIS BEGUIN

- 14H00** **Pr Daniel Steingart**  
Learning New Things from Old Chemistries: Revisiting Ideas "Before Lithium Ion"
- 14H40** **Dr Rahul Walawalkar**  
Drivers for energy storage adoption for grid applications: Insights from US & India
- 15H20** **Pr Gopalakrishnan Gopu**  
Challenges on existing power sources-Aversion from social science
- 16H00** Coffee break – Posters session
- 16H30** **Pr David Koester**  
The social dimensions of hydrogen deployment

### 17H00 **Fabien Nony**

CEA presentations

- 18H15** Shuttle departure to Wine testing and dinner

## 8 SEPTEMBER 2016

### SESSION 1: CHAIRMAN DANIEL STEINGART

- 08H15** Shuttle departure from Tours to Domaine de la Tortinière
- 08H30** Welcome coffee
- 09H10** **Pr Sagar Mitra**  
Understanding the Conversion Reaction from Modeling and Experimental Studies and use in practical applications
- 09H50** **Pr Francois Béguin**  
High energy electrochemical capacitors based on hybridization of electrodes
- 10H30** Coffee break – Posters session

### SESSION 2: CHAIRMAN DANIEL STEINGART

- 11H00** **Dr Shirley Meng**  
From Theory to Microgrid - Electrochemical Energy Storage Challenges
- 11H40** **Pr Harry Hoster**  
Lithium oxygen cells as function generators: from declining logarithms to sine oscillations
- 12H20** Lunch

### SESSION 3: CHAIRMAN RACHID YAZAMI

- 14H00** **Pr Vijaymohanan Pillai**  
Can Electrochemistry help to develop Next Generation Energy Storage?
- 14H40** **Dr Satyajit Phadke**  
High Temperature Batteries for Grid Scale Storage Applications
- 15H20** Coffee break – Posters session

### SESSION 4: CHAIRMAN RACHID YAZAMI

- 15H50** **Pr Qing Wang**  
Redox Flow Lithium Batteries for Large-scale Energy Storage
- 16H30** **François Hubert**  
KEMWATT
- 17H15** Shuttle departure to the Tours City Hall

### SESSION 5: CHAIRMAN MÉRÏÈM ANOUTI

- 18H30** **Anne De Guibert**  
L'énergie disponible à tout moment : produire, économiser, stocker  
French grand public conference, LE STUDIUM LECTURE
- 20H00** Shuttle departure to the gala dinner

9 SEPTEMBER 2016

**SESSION 1: CHAIRMAN PIERRICK BUVAT**

**07H45** Shuttle departure from Tours to Domaine de la Tortinière

**08H00** Welcome coffee

**08H30** **Dr Richard Dawson**

Alkaline fuel cells, the advantages, the challenges and possible futures

**09H10** **Pr Eric D. Wachsman**

Ion Conducting Oxides for Electrochemical Energy Conversion and Storage

**09H50** **Dr Javier R Varela**

Development of high-performance anode and cathode nanocatalysts for acid and alkaline Direct Alcohol Fuel Cells

**10H30** Coffee break – Posters session

**SESSION 2: CHAIRMAN BÉNÉDICTE CLAUDE-MONTIGNY**

**11H00** **Pr EunAe Cho**

Non-precious catalysts for oxygen reduction reaction and oxygen evolution reaction in fuel cells and electrolysis cells

**11H40** **Dr Himanshu Tyagi**

Efficient Energy Transfer & Storage: Utilizing Nanoparticles for Harnessing Solar Energy

**12H20** Lunch

**SESSION 3: CHAIRMAN SATYAJIT PHADKE**

**14H00** **Pr Ki Tae Nam**

Bioinspired Water Oxidation and CO<sub>2</sub> Reduction Electrocatalysts

**14H40** **Xavier de Logiviere**

NAWATechnologies

**15H20** Coffee break – Posters session

**SESSION 4: CHAIRMAN SATYAJIT PHADKE**

**15H50** **Dr Roman Mysik**

Enhancing the performance of supercapacitors by optimizing electrode/electrolyte interface

**16H30** **Dr Chandrasekaran**

Future of electrochemical capacitors

**17H10** Conclusions

**18H00** Shuttle departure to Tours



**SHUTTLES SCHEDULE TO/FROM EVENT LOCATION**

The times listed in this schedule are exact departure times.

Please make sure to check-in 10 minutes in advance

**WEDNESDAY 7 SEPTEMBER 2016**

**08H00** Hôtel Univers to Domaine de la Tortinière

**18H15** Domaine de la Tortinière to Château d'Aulée

**21H30** Château d'Aulée to Hôtel Univers

**THURSDAY 8 SEPTEMBER 2016**

**08H15** Hôtel Univers to Domaine de la Tortinière

**17H15** Domaine de la Tortinière to Tours City Hall

**20H00** Tours City Hall to the Gala dinner

**23H00** Gala dinner to Hôtel Univers

**FRIDAY 9 SEPTEMBER 2016**

**07H45** Hôtel Univers to Domaine de la Tortinière

**18H00** Domaine de la Tortinière to Tours Train Station

**CONTACT**

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**LE STUDIUM**

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LE STUDIUM

**CONFERENCES**

TOURS | 2016

PROGRAMME

# 7-9 September 2016

## Future strategies in electrochemical technologies for efficient energy utilisation

**LOCATION**

Domaine De La Tortiniere  
10 route de ballan  
37250 Veigné

**CONVENORS**

**Dr Satyajit Phadke**

LE STUDIUM RESEARCH FELLOW

FROM Customized Energy Solutions,  
India

IN RESIDENCE AT: PCM2E, Tours – EA  
6299 - University François-Rabelais  
of Tours

**Dr Chandrasekaran**

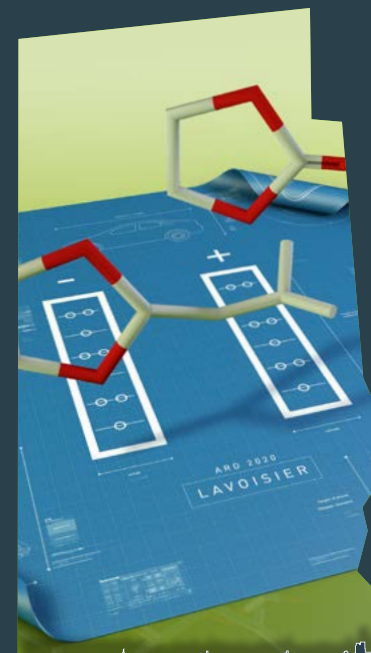
LE STUDIUM RESEARCH FELLOW

FROM India

IN RESIDENCE AT: PCM2E, Tours – EA  
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**Pr Mériem Anouti**

PCM2E, Tours – EA 6299 - University  
François-Rabelais of Tours



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