



United Nations  
Educational, Scientific and  
Cultural Organization



International  
Year of Light  
2015

# HI-LED

**Workshop 2015**

## **“Digital lighting and human health”**

**18th June 2015, Barcelona, Spain**



### **The Workshop**

This scientific event is organized by the Lighting Group of IREC (Catalonia Institute for Energy Research) in the framework of the FP7 Programme Project “HI-LED: Human-centric Intelligent LED engines for the take up of SSL in Europe”. HI-LED aims at implementing SSL-based spectrally tunable light sources, whose spectral content can be dynamically adapted, by means of close-loop monitoring and complex algorithms, to different application fields; between them, human-centric lighting.

Lighting conditions affect to cognitive abilities and behaviours. Full control of spectral features of lighting enables the possibility of discriminating and individually exploiting such effects. SSL light-engines with added intelligence offer the possibility of tailoring spectral distributions respectful with our circadian rhythms or capable of inducing desired effects on behaviour, mood and/or physiology. The objective of HI-LED Workshop is attracts the participation from senior representatives of leading public, industrial companies, education and research organisations around the world interested in human-centric lighting to discuss about advances in the field, foster LED based technology and identify opportunities for research and collaboration under Horizon 2020 framework.



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[www.hi-led.eu](http://www.hi-led.eu)

## Key-subjects

- Human centric lighting
- Tunable lighting systems for biological rhythms adaptation and hormone balance
- Solid State Lighting for mood and cognitive performance
- Solid State Lighting for non visual pathways stimulation

## Program

3:00 pm - 3:15 pm, Presentation of "HI-LED project", Dr. J. Carreras and Dr. M. Perálvarez, (Catalonia Institute for Energy Research IREC, Spain)

3:15 pm - 3:50 pm, Keynote 1: "Biological effects of light: implications for human health", Dr. C. Gronfier (Institut National de la Santé et de la recherche médicale INSERM, France)

3:50 pm - 4:25 pm, Keynote 2: "Using Tuneable LED Light Sources to Modulate the Non-Visual Pathway", Dr. A. Hurlbert and S. Aston (Institute of Neuroscience, Newcastle University, UK)

4:25 pm - 5:00 pm, Keynote 3: "Human Centric Lighting in Application" A. Wojtysiak (OSRAM GmbH, Germany)

5:00 pm - 5:25 pm, Coffe break and networking

5:25 pm - 6:00 pm, Keynote 4: "Light effects on circadian rhythms: Lessons from animals lab", Dr. T. Cambras (Faculty of Pharmacy, University of Barcelona, Spain)

6:00 pm - 6:35 pm, Keynote 5: "Protecting the melatonin rhythm through circadian healthy light exposure", M<sup>a</sup> Ángeles Bonmati (Chronobiology Laboratory, University of Murcia, Spain)

• 6:35pm - 6:45pm, Closing

## Venue

- Date: 18<sup>th</sup> June 2015
- Location: Hotel SB Diagonal Zero  
Plaça de Llevant, s/n  
08019 Barcelona, SPAIN

