

Celebration of the 200th anniversary of the birth of Edmond Becquerel, discoverer of the photovoltaic effect, March 24, 2020, Paris



Edmond Becquerel was born on March 24, 1820, he is the son of Antoine Becquerel and the father of Henri Becquerel, discoverer of radioactivity and Nobel Prize in Physics with Pierre and Marie Curie. He conducted his research and teaching at the Museum National d'Histoire Naturelle and at the Conservatoire National des Arts et Métiers. He was a member and then president of the French Academy of Sciences. He is at the origin of major advances in the study of the effects of light on materials, with in particular **the discovery of the photovoltaic effect**, the invention of the first color photography process, the study of phosphorescence. His work is recognized worldwide. He still remains rather unknown in France. The celebration of the bicentenary of his birth is an opportunity to discover his exceptional scientific contributions and their today actuality.

Location: Amphitheater Farabeuf, 15 rue de l'Ecole de Médecine in Paris 6th, not far from the Museum National d'Histoire Naturelle, where his laboratory and his house are still located.

Organizers and contacts :

Daniel Lincot, CNRS, Institut Photovoltaïque d'Île de France (IPVF). Email: Daniel.lincot@cnr.fr

Bertrand Lavédrine, Center for Research on Conservation - CNRS, National Museum of Natural History, Paris. Email: bertrand.lavedrine@mnhn.fr

Scientific committee and partnerships: The symposium is supported by numerous personalities * participating in the scientific committee and numerous institutions from academic and industrial domains.

Sponsoring: The possibility of sponsorship is open. Please contact the organizers.

Web Site and Programme : <https://www.ipvf.fr/edmond-becquerel-symposium/>

Inscriptions : free of charge but necessary via the web site

Edmond Becquerel, 1839 – “Report on the electrical effects produced on the influence of solar light”, [Comptes rendus de l'académie des sciences 9\(1839\)561](#)



The rays associated to the most refrangible rays of sunlight, when reaching metal blades immersed in a liquid, are creating electrical effects that are specifically attributed to them, and that cannot be attributed to a calorific origin.

*E. Amouyal, O. Azzola, L. Barbo, N. Barreau, C. Blondel, J. E. Bourée, G. Chambaud, J.P. Chevalier, X. Daval, R. Drozdowski-Strehl, L. Dufaux, A. Grassi, J. F. Guillemoles, D. Guthleben, J.P. Kleider, M. A. Languille, F. Lambert, J.L. Lazzari, M. Leduc, T. Leroux, J.M. Lourtioz, R. Loyer, J. Luther, P. Malbranche, G. Masson, W. Palz, P. Roca i Cabarrocas, P. Rigny, D. Roux, N. Schneider, H. Schock, A. Slaoui, C. Subran, D. Suchet, J. M. Tarascon

Edmond Becquerel Symposium, 24th march 2020, Paris
Provisionnal Programme

Organizers : Daniel Lincot (CNRS-IPVF) and Bertrand Lavedrine (MNHN)

Opening session

9 am-9.30am Under the presidency of Bruno David, President of the Muséum National d'Histoire Naturelle et de Roch Drozdowski-Strehl (General Director of IPVF), Joachim Luther (President of the European Becquerel Prize Committee for Photovoltaics), CNAM, Académie des Sciences, Ecole Polytechnique, Gilberte Chambaud (University Paris Est Marne la vallée), Costel Subran (F2S)

Session 1 - Chair: Denis Guthleben (CNRS)

9.30-10 am "**A Passion for Extreme Light**",
Gérard Mourou (Nobel Prize in Physics 2018, Ecole polytechnique)
10-10.20 am "**Panorama of life and work of Edmond Becquerel**"
Daniel Lincot (CNRS-IPVF)
10.20-10.40 am "**The Becquerel, a line of experimenters**",
Christine Blondel (historian)
10.40-11 am Break

Session 2- Chair: Wolfgang Palz

11-11.20 am "**The electrochemical actinometer and the discovery of the photovoltaic effect**",
Jérôme Fatet (University of Limoges)
11.20-11.40 am "**Edmond Becquerel and photography**",
Bertrand Lavédrine (MNHN) and Victor de Seauve (Postdoc)
11.40-12 am "**Color photography by Edmond Becquerel and quantum mechanics**",
Lucia Reining and Francesco Sottile (LSI, Ecole polytechnique)

12 am. - 2 pm Free Lunch

Session 3-Chair: Michèle Leduc (SFP)

2 pm-2:25 "**The phosphoroscope of Edmond Becquerel: the reconstructed experience**",
Guilhem Gallot with the project group students (Ecole Polytechnique)
2:25. - 2:45 p.m. "**From phosphorescence to the ultimate efficiency of solar cells**",
Jean François Guillemoles (CNRS-IPVF)

Session 4-Chair: Gaëtan Masson (Inst. Becquerel)

14.45-15.00 "**30 years of the Edmond Becquerel Prize for photovoltaics**",
Joachim Luther (ISE Fraunhofer)
3 pm-3:30pm "**Status and perspective of todays main PV technology** ",
Joachim Luther and Stephan Glunz (ISE Fraunhofer)
3.30-3.50pm "**The photovoltaic industry in France**",
Xavier Daval (SER), Richard Loyer (ENERPLAN)
3:50 p.m. - 4:10 p.m. Break

Session 5 - Chair: Marika Edoff (Uppsala Univ.)

4:10 p.m. - 4:50 p.m. "**From Dye Cells to Perovskite Solar Cells: New avenues for Photovoltaics**"
Michael Graetzel (EPFL, Lausanne)

Closing session Chair: Edmond Amouyal (Ecole polytechnique)

4:50 p.m. - 5:15 p.m. "**Antoine, Edmond, Henri, Jean, what lessons for the present time?**"
Jean Pierre Chevalier (CNAM), Nathanaelle Schneider (CNRS), Leatitia Brottier (Dualsun), Daniel Suchet (Ecole Polytechnique)

6 p.m.-6:30 p.m. **Closing Ceremony at Museum National d'Histoire Naturelle**

