



Prof. Pere Roca i Cabarrocas, is an Electrical Engineer from the “Universitat Politècnica de Barcelona”. In 1984 he moved to Paris, where he received his PhD from University Paris VII in 1988. After a post-doc position in Princeton University he joined the Laboratory of Physics of Interfaces and Thin Films at Ecole Polytechnique where he holds a position as a CNRS director of research and as a professor. From 2012 to 2020 he was the director of LPICM and of the French PV Federation. He is currently the scientific director of IPVF. He has thirty years of experience in the field of plasma deposition of silicon based thin films for large area electronic applications. His topics cover the study of RF discharges for the deposition of amorphous, polymorphous and microcrystalline silicon thin films. He has used in-situ diagnostic techniques such as UV-visible ellipsometry, Kelvin probe and time resolved microwave conductivity to understand the growth of these materials and apply them to the production of devices such as solar cells, thin film transistors, particle detectors, sensors, etc. More recently he has been applying silicon nanocrystals synthesized in the plasma as building blocks for the epitaxial growth of silicon thin films and Si/Ge quantum wells. On the other hand, he has extended the plasma processes to the growth of vertical silicon nanowires for third generation solar cells and of horizontal ones for planar electronic applications. He was the recipient of the Médaille Blondel in 2004, of the Innovation Award at Ecole polytechnique in 2009 and the Silver medal from CNRS in 2011. Since 2016 he is invited professor at Nara Institute of Technology and scientific director of IPVF since 2019. He has over 520 papers, holds 38 patents and has supervised 56 PhD students.

