



## Prof. Jacques Eugene Amouroux

University Pierre et Marie Curie /ENSCP

**Main research field:** Plasma chemical engineering and energy balance ;Carbon dioxide recovery for energy storage

**Resume:** Jacques Amouroux received Doctor degree from Sciences Physic University de Paris La Sorbonne in 1971, and is Emeritus Professor ENSCP/UPMC , expert ANR (National french Research Agency). He was Head of the department of Chemical Engineering

ENSCP/UPMC and full Professor, and head of the Plasma Chemical processes Laboratory from 1980-2007. He own 50 patents and has published 450 papers.

Doctor Jacques Amouroux opens the field of plasma chemical process in 1964 and developed radicals mechanisms in the field of plasma chemical reactions by using CH<sub>4</sub> as a model to qualify the energy storage. Different kinds of reactors were developed to control the energy transfert from electron to gas:high temperature or non-equilibrium reactors, plug flow or fluidized bed, inductive or capacitive electrical discharge.

This new field of excited states from electron impact with atoms or molecules was qualified by using technics such as optical emission spectroscopy ,mass spectroscopy ,labeled molecules (D<sub>2</sub>O, O<sub>2</sub>(18) )in order to point out the specific reactions of species such as Ar excited or Ar<sup>+</sup>, He(3) ,H (n=4,5,6,7 ) O 1D ,N<sub>2</sub> A<sub>3</sub> Σ<sub>u</sub>,N<sub>2</sub> B<sub>3</sub>π<sub>g</sub> ,N<sub>2</sub> C<sub>3</sub>π<sub>u</sub> or some unusual radical such CH singlet or triplet state ,CF triplet state etc.the fundamental steps for the control of the process and simulation of hydrodynamic and reaction models permit the industrial scale up of these technics. These new activities was supported bymany international and industrial connections

He was chairman of High temperature Material Society and High Technology Plasma Processes meetings (HTPP) (1992-2008), chairman of the photovoltaic French committee ADEME (1980-1983), Chairman of the Photovoltaic French committee ANR(2005-2008),coeditor of the international journal High Temperature Material (1992-20011).

He is member of the American Chemical Society, the New York Academy of Science,European Material Research Society and Société Française de Physique,

Dr. Amouroux received many awards including: Commandeur des Palmes Académiques by French Minister of research and Education,Doctor Honoris Causa by the Polytechnic State University of Saint Petersburg, silver medal of research by La Mairie de Paris.