

DR. SADEK IGOUD



BIOGRAPHY

Sadek Igoud has obtained his degrees of engineering and Magistère from the National Higher School of Agronomy (ENSA) in 1991 then 1995. In 2015, He defended his Doctorat titled ‘integration of renewable energies and sustainable processes for urban wastewater treatment’ at the National Polytechnic School (ENP). His Ability to conduct researches was obtained in 2018 at Yahia Fares University. Since 2000, he worked at CDER for conducting biogas project. From 2006 until now, he works at UDES for the developing of sustainable wastewater treatments in “Rejected wastewater treatment and recovery” (EVER) research team. During his professional career, he designed and experimented many prototypes also he has authored several conference papers, publications and patents.

PLENARY TITLE

“From Sun to Bioenergy: origin, conversion and utilization”

ABSTRACT

Bioenergy is still little known compared to other renewable energies in particular solar energy. This even if it uses also sunlight! In effect, it presents a parallel to solar energy that is converted to electricity via photovoltaic panels and stored in batteries. Equally to solar thermal energy that is converted to heat and stored in phase change materials.

Effectively, Bioenergy is converted from sun via photosynthesis to produce carbohydrates that are stored in biomass. As a battery storage system, biomass offers the possibility to be converted by several processes as combustion, gasification, aerobic digestion, methanization, esterification, metabolic pathways... to produce solid, liquid and gaseous biofuels. These several forms of renewable energies are thus used for electricity generation, heat production, in transport...

Apart of the renewable energy generation, Bioenergy offers also solid and liquid wastes exploitation thus their treatment and recycling for zero liquid discharge benefit to environment preservation.