

8th International Conference on **Environmental Chemistry and Engineering**
&
7th Edition of International Conference on
Green Energy, Green Engineering and Technology

September 20-22, 2018 Berlin, Germany

**Paul O'Connor**

ANTECY, Netherlands

CO₂ and carbon capturing, utilization and valuation

The accelerated use of fossil resources over the last 200 years has led to a sharp increase in CO₂, now already at 400 ppm and also the increase of methane (CH₄) in the atmosphere, triggering global warming. It is our responsibility to invent, develop and apply the right green chemistry making use of the available natural resources such as CO₂, water and biomaterials in a way which does not harm the ecosystems of our earth, i.e., in a circular and sustainable way. Innovations in this exciting field over the last 15 years will be highlighted, leading to new technologies, opening up the possibilities for advanced materials and chemicals from biomass, biomass waste and from CO₂ and water from the open air, making use of clean renewable energy (solar, wind, and hydropower etc.). Specific examples will be elucidated: capturing and concentration of CO₂ from open air sources; conversion of fossil hydrocarbons into clean hydrogen and valuable carbon and; harvesting of high quality cellulose and lignin materials from biomass. A combination of these promising technologies offers the possibility of transforming the CO₂ and/or carbon emissions problem into opportunity for producing valuable products.

Biography

Paul O' Connor has completed his Graduation at the Eindhoven University of Technology in Chemical Engineering in 1977. He has been active in heavy oil conversion processes at Shell and at Akzo Nobel in development of refining catalysts. In 2006, he formed BIOECON, focused on the economic conversion of biomass. BIOECON has developed several breakthrough concepts, most recently a process towards selective biomass fractionation producing high value materials. In 2010, he formed ANTECY aiming to convert renewable energy directly into high-density liquids. ANTECY has developed technology for the capturing of CO₂ based on a low cost and environmentally friendly non-amine sorbents.

Paul.oconnor@antecy.com**Notes:**