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Necessity of getting faster renewable energy and green chemistry development

Abstract:

Some conditions of necessary sustainable faster Green Energy Transition had been already discussed during COP21 in Paris 2014. Main causes of slower development have been identified in consequence of several lacks which have to be overcome considering that implementation of new technologic means will not always insure their competitiveness to older established means and when necessary important public support for corresponding huge investments and running costs are nowhere sufficiently available. New decisive scientific fundamentals and applied technologic progress will have a key role for the reduction of energy consumption and production of cheaper green energy and green chemistry devices which are compatible with the interest and financial security of the common investment world. Several forgotten and neglected aspects of scientific fundamentals and applied technological developments of better performing solutions appear to be necessarily considered. This is especially concerning the thermodynamics of endothermic and exothermic quantum electronic based reactions and considering the high potential of more advanced carbon materials for many different domains including energy production, storage and conversion, nanotechnologies and mechanical and tribological applications. They used to be often confronted and hampered by non-mastered and non-understood effects and non-satisfactory established fundamentals concerning their specific phase transformation, and spectroscopic characterization and not always corresponding to predicted and expected outstanding properties. Much confusing the established definition of carbon Raman D diamond and G graphitic bands and especially concerning the hypothetical concept of atomic disorder Raman D' and G' peaks, the superimposition of different substructures bands, the internal stress causing spectroscopic shifts which must be differently assigned, the locality of some specific phonon breathing modes, and last but not least, different sorts of contradicting phase transitions. Clearing comprehensively these aspects is expected to provide the perspectives of well mastered processes for many more performing application domains and particularly concerning the cheaper production of green hydrogen and renewable energy, which can be used for better competitive modern transportation systems.

Biography

Stephane Neuville obtained a degree in physics at Grenoble Polytechnic Institute with Louis Neel in 1970. In 1996 he obtained a PhD at Ecole Polytechnique (X) in Palaiseau France on plasma and thin film technologies. Between 1971 and 2005, with different companies involved with thin films, plasma technology, and analytical instruments, he closely associated R&D to export and general management with fast growing results. After deep longer health problems (well recovered since that time) he acts as an independent consultant, and revisited some key fundamentals for quantum electronic activated atomic rearrangement and sorting out some Carbon Raman spectroscopy incoherencies and with which decisive better comprehensive mastering of selective carbon materials can be achieved for more demanding nanotechnology applications and potentially much more performing photovoltaics and concerning as well other scientific domains such as early earth astrophysics and first model for NRA abiotic synthesis, low energy CNO nuclear fusion reactor feasibility, new physical superconductivity model.