Alexander Ivlev, Expert Opin Environ Biol 2014, 3:1
http://dx.doi.org/10.4172/2325-9655.C1.001

OMICS International conferenceseries.com SciTechnol

3rd International Conference on
Biodiversity & Sustainable Energy Development
June 24-26, 2014 Valencia Conference Centre, Valencia, Spain

Alexander Ivlev
Russian State Agrarian University, Russia

Global carbon cycle: Interaction of photosynthesis and earth crust processes

A new presentation on global carbon cycle is given. Cycle is regarded as a turnover of this element from oxidizing state presented by carbon dioxide, bicarbonate and carbonate forms, into reducing state presented by various forms of biogenic carbon and back. The transition of carbon from oxidizing into reducing state occurs by means of photosynthesis. The transition of the carbon from reducing into oxidizing form is fulfilled by means of sulfate reduction in subduction zones where lithospheric plates collide. The global carbon cycle mechanism is based on the concept of plate tectonics and that of orogenic cycles. A new interpretation of ecological compensation point concept is given. The presentations on global carbon cycle are substantiated by various arguments from different sources (by carbon isotope data on sedimentary organic matter and oils, by model reconstructions of climate, by paleontological data, including data on biodiversity, and others).

Biography

Alexander Ivlev received his PhD (1968) at Mendeleev Chemical Technology Institute (Russia) on studies "Thermodynamics of Isotope Exchange of Elements with Middle and Heavy Masses". After Post doctorate studies he worked in All-Union Oil Research Institute. His next PhD (1986) he received at Institute of Chemical Physics of Russian Academy of Sciences on studies "The Regularities of Carbon Isotope Fractionation in Biological Systems". In 2005, he was awarded by Medal of Russian Academy of Natural Sciences "To Author of Scientific Discovery" for establishing link between carbon isotope distribution in metabolites and temporal organization of metabolic processes. Keeping on his work in Oil Research Institute in 1994 he was invited to lecture for students in Russian State Agrarian University. In 1995 he received Professor's degree. At present the fields of his scientific interests are photosynthesis, plant physiology, geochemistry, molecular biology. He is author of 4 scientific monographs and has about 200 publications.

aa.ivlev@list.ru