

Karl Friedrich Bonhoeffer Award Lecture



John Sutherland

MRC Laboratory of Molecular
Biology, Cambridge, UK



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Manfred Eigen Hall

MPI for Biophysical Chemistry
(Karl Friedrich Bonhoeffer Institute)

Origins of Life Systems Chemistry

By reconciling previously conflicting views about the origin of life – in which one or other cellular subsystem precedes, and then ‘invents’ the others – we suggested a new *modus operandi* for its study. Guided by this, we uncovered a cyanosulfidic protometabolism which uses UV light and the stoichiometric reducing power of hydrogen sulfide to convert hydrogen cyanide, and a couple of other prebiotic feedstock molecules which can be derived therefrom, into nucleic acid, peptide and lipid building blocks. We are now considering the transition of systems from the inanimate to the animate state through intermediate stages of partial ‘aliveness’, and recent progress in the elaboration of building blocks into larger (oligomeric) molecules and systems in this context will also be described.

Host: Stefan W. Hell