

Experiments of formations of inorganic carbonates and nano-bacteria-like textures for application extra-terrestrial bodies

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Results are summarized as follows:

- 1) It is required for existence of organic life that dynamic processes should be found in inorganic and organic materials at short and long periods.
- 2) Formation and existence of Universe, Earth planet and life are irreversible processes of materials, and dynamic growth from nano-particles.
- 3) Impact energy in cosmos produces dynamic growth process from nano-particles, but brings breaking to fine grains from large growth materials as cyclic system.
- 4) Major elements to form stable compounds among three states by impact energy are H,C,O,N elements, whereas H,C,O elements of water and carbon dioxides form giant molecules of inorganic and organic molecules from nano-particles by dynamic reaction.
- 5) Author can synthesize various nano-bacteria-like fine-texture of carbonates at low calcite and high-pressures aragonite at laboratory, because C and O elements can form various materials from nano-particles to calcite crystals when there are sources of Ca elements.
- 6) Chlorine forms stable compounds among three VLS states except light elements, and inevitable components of sea-water and life. When there is iron element as in meteorites, akaganeite grains with rosettes to nano-bacteria-like textures can be formed dynamically by laboratory experiment by author.
- 7) It is difficult to form and maintain organic life because all materials are repeated cyclic system as irreversible changes. Remained inorganic fossils from organic to inorganic materials require rapid separated processes to keep its products. Fossil minerals can be found by stopped activity on planet Mars and escaped activity from parent bodies to cosmic space as meteorites.