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# What shock waves create

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It has been known that thermal and light energies cause complicated and long-term global changes by the interaction among life, water, mineral, and atmosphere on Earth. Recent research, however, reveals a large flux of shock energy on early Earth, but materials evolution by shock energy is not well known yet. Only few researchers are working in this field of research and a limited number of experimental facilities are available at present.
I address basic scope for such shock experiments and present recent our results on water-mineral interaction and life-water-mineral-atmosphere interaction.

This research was carried out with National Institute for Materials Science and Tohoku University.
Y. Furukawa, T. Sekine, M. Oba, T. Kakegawa, and H. Nakazawa (2009) Biomolecule formation by oceanic impacts on early Earth. Nature Geoscience 2, 62-66.

Keywords: shock wave, meteorite impact, shock synthesis, biomolecules, shock experiment