paper written in 1889 he does not confine the metamorphic action of mountain-movements to sedimentary formations, but in common with Lehmann he regards gneiss, hornblendic schist, and other crystalline schists as eruptive rocks (granite, syenite, diorite) in which planes of schistosity have been developed under the influences of pressure and stretching. Rosenbusch does not believe it possible that the fundamental gneisses and schists could have originated as chemical precipitates from a primæval ocean, or any primæval mixture of rock-material and superheated water. As he further points out, the idea has been exploded that schistosity is a feature peculiar to Archæan rocks, it may indeed be possessed by young-Tertiary rocks. From the general distribution and stratigraphical position of the "fundamental" series, Rosenbusch concludes that it represents in its deeper horizons the first consolidated crust. He thinks the agreement in the mineralogical composition, as well as the interleaving of the Archæan gneisses and schists with the oldest eruptive rocks, would seem to indicate that the Archæan foliated rocks have at least in part originated from the same magma as deep-seated plutonic rocks. But whereas in the case of the granite-grained bosses of rock there is internal evidence that the minerals had separated from the magma in a definite order according to chemical laws, this is quite lacking in the gneissose and schistose rocks, which rather indicate that consolidation had been controlled by mechanical pressure.

In chemical respects the crystalline schists agree sometimes with massive eruptive rocks, sometimes with sedimentary rocks, and in all probability they have originated from various rocks, from deep-seated and eruptive masses, from intrusive and superficial eruptive flows, from eruptive tuffs, and from all kinds of stratified deposits. According to Rosenbusch, dynamo-metamorphism is the active principle that produces the banded and finely foliated forms of rock-structure.

In his *Elements of Petrology* (1898) Rosenbusch defines the crystalline schists as "eruptive or sedimentary rocks which have been geologically transformed through the essential co-operation of geo-dynamic phenomena." He distinguishes the "fundamental" series as an independent primæval formation, and describes the younger schists as local facies of different rock-varieties and not confined to any geological epoch.

Credner and Zirkel take exception to these views in certain