

I. A thermopile is an electronic device that converts thermal energy into electrical energy. It is composed of several thermocouples connected usually in series or, less commonly, in parallel. Thermopiles do not respond to absolute temperature, but generate an output voltage proportional to a local temperature difference or temperature gradient.

II. Peptization is the process responsible for the formation of stable dispersion of colloidal particles in water. This is particularly important in colloid chemistry or for precipitation reactions in an aqueous solution. When colloidal particles bear a same sign electric charge, they mutually repel each other and cannot aggregate together. Freshly precipitated aluminium or iron hydroxide is extremely difficult to filter because the very fine colloidal particles directly pass through a paper filter. To facilitate the filtration, the colloidal suspension must be first flocculated by adding a concentrated solution of salt to the system. Peptization is also used in nanoparticle synthesis to make a large grouping of particles split into many primary particles. This is done by changing the surface properties, applying a charge, or by adding a surfactant.