

# Temperature influence on Matteucci Effect in Fe-based amorphous wire

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The Matteucci Effect (ME) is one of the magnetomechanical effects, among others, like magnetostriction, magnetoelasticity, etc. The main result of this effect is a change in circular magnetization of the sample under the influence of applied variable axial magnetic field. In the case of wire samples, the ME manifests itself as induced sharp voltage spikes at the ends of the sample.

Environmental conditions, such as temperature, often change some of the magnetic parameters of materials, such as coercivity. The influence of the temperature change of devices which utilize ME sensors could have significant impact on the device's operation.

The ME voltage spikes response in amorphous Fe-based wires in the function of temperature was investigated in this paper.