Aspects of magnetocaloric effects and hyperthermia using magnetic materials

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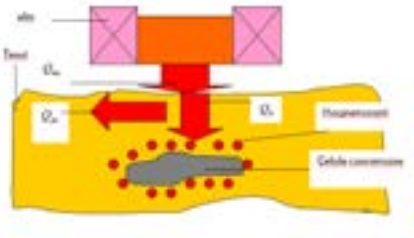
The paper presents the concerns of the authors about electromagnetic fields effect with potential applications in hyperthermia. Some theoretical aspects about using magnetosomes (magnetic nanoparticles found inside of Magnetotactic bacteria) in medical procedures in anticancer are commented. The next step is proposing a magnetic device that can also generate a thermal effect, the magnetic circuit having magnetic nanoparticles inside (case study magnetosomes) which powered at different frequencies can build a useful device in hyperthermia. Some projecting elements are presented, theoretical elements about thermodynamic involved, the behavior of magnetosomes introduced in tissues, and the arguments why magnetosomes can provide us with a solution are presented. Specific characteristics of magnetosomes and an obtaining technology are also presented.



Biography

Elena Yuan is a Member of Excellency Centre for Young Olympics, part of (ICPE-CA)

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