



The **Realisation** of Research

Magnetic Hyperthermia Device for Healthcare and Industrial Applications

Case ID:

74-020

Web Published:

Mar 1, 2011

Category(s):

Laboratory Equipment & Imaging

Description:

Magnetic Hyperthermia Device for Healthcare and Industrial Applications

Available for: Licensing

Summary

Exposure of magnetic nanoparticles to an alternating magnetic field results in localised heating which can kill cells in the immediate vicinity of the heated nanoparticles. This device may be useful for antimicrobial and cancer treatment or for numerous industrial applications.

The Technology and its Advantages

UCL has a working prototype of an inductive heating system that provides a hyperthermia effect on implanted magnetic nanoparticles. The system is a novel electronic circuit that automatically tunes to the resonant frequency of a capacitor/inductor system used to drive a high frequency AC magnetic field. Benefits of this system include low power, mobility and adaptability to suit a controlled application of AC magnetic fields within an open environment as required for instance for medical purposes.

Market Opportunity

The patented device could be used for many purposes including:

- prevention and treatment of infectious diseases
- disinfection or sterilisation of blood and blood products,
- sterilisation of medical devices
- disinfection of water supplies
- disinfection of food and beverages
- cancer treatment

Intellectual Property Status

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Patent application filed January 2009

Further Information

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Keywords:

Direct Link:

<http://uclb.technologypublisher.com/technology/6502>