



SOCIÉTÉ FRANÇAISE
DE PHYSIQUE

Section Locale
ALSACE



Dernière Conférence SFP de l'année universitaire

Sir John PENDRY

Imperial College, London

Negative Refraction

Mardi 29 juin 2010 à 17h30 heures

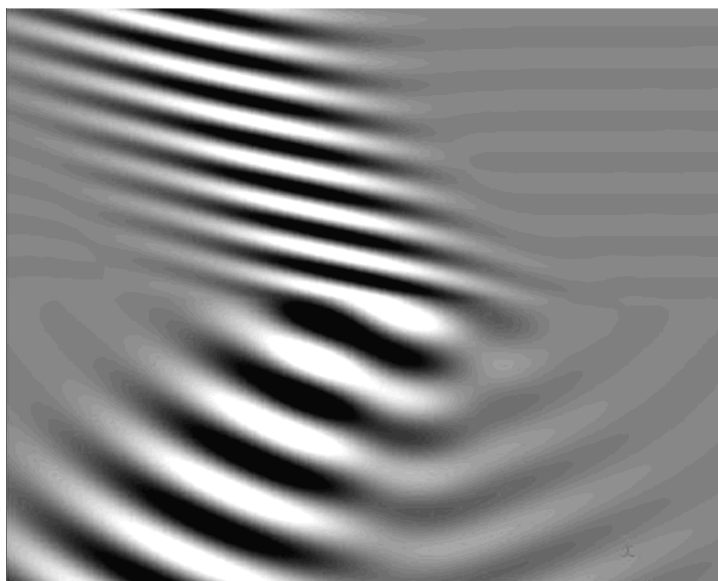
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Evening lecture of the
European Summer Campus

Metamaterials:

Why light bends the wrong way,
Why things don't fall down.

Strasbourg June 27-July 5



AJ Hoffmann, Princeton
Nature Materials 6, 946 - 950 (2007)

Light bends the wrong way in materials where both ϵ and μ are negative as was pointed out in 1968, but the absence of natural materials with this property led to neglect of the subject until 1999 when it was shown how to make artificial materials, metamaterials, with negative μ .

The rapid advance of the subject since that date, both in theory and experiment, is reflected in the exponential growth of publications at the 200-per-year level in 2004 and still growing. The interest is explained by the sudden availability of a qualitatively different class of electromagnetic materials combined with the startling properties which these materials appear to have; all of which provokes debate as each new facet of their behaviour is revealed. Experiment has been vital to resolution of controversy and has chiefly been in the microwave region of the spectrum though there is potential in the optical region currently being explored by several groups.

- Le café sera exceptionnellement servi en salle des enseignants -

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