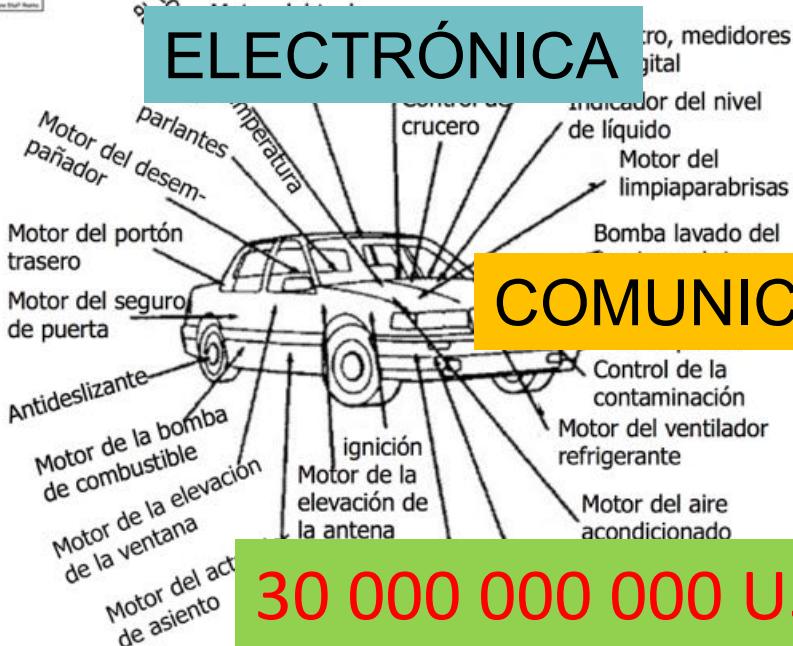


¿Dónde encontramos materiales magnéticos?

ELECTRÓNICA



COMUNICACIONES



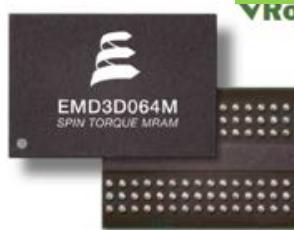
ENERGÍA



30 000 000 000 U\$D/año

(Coey 2009)

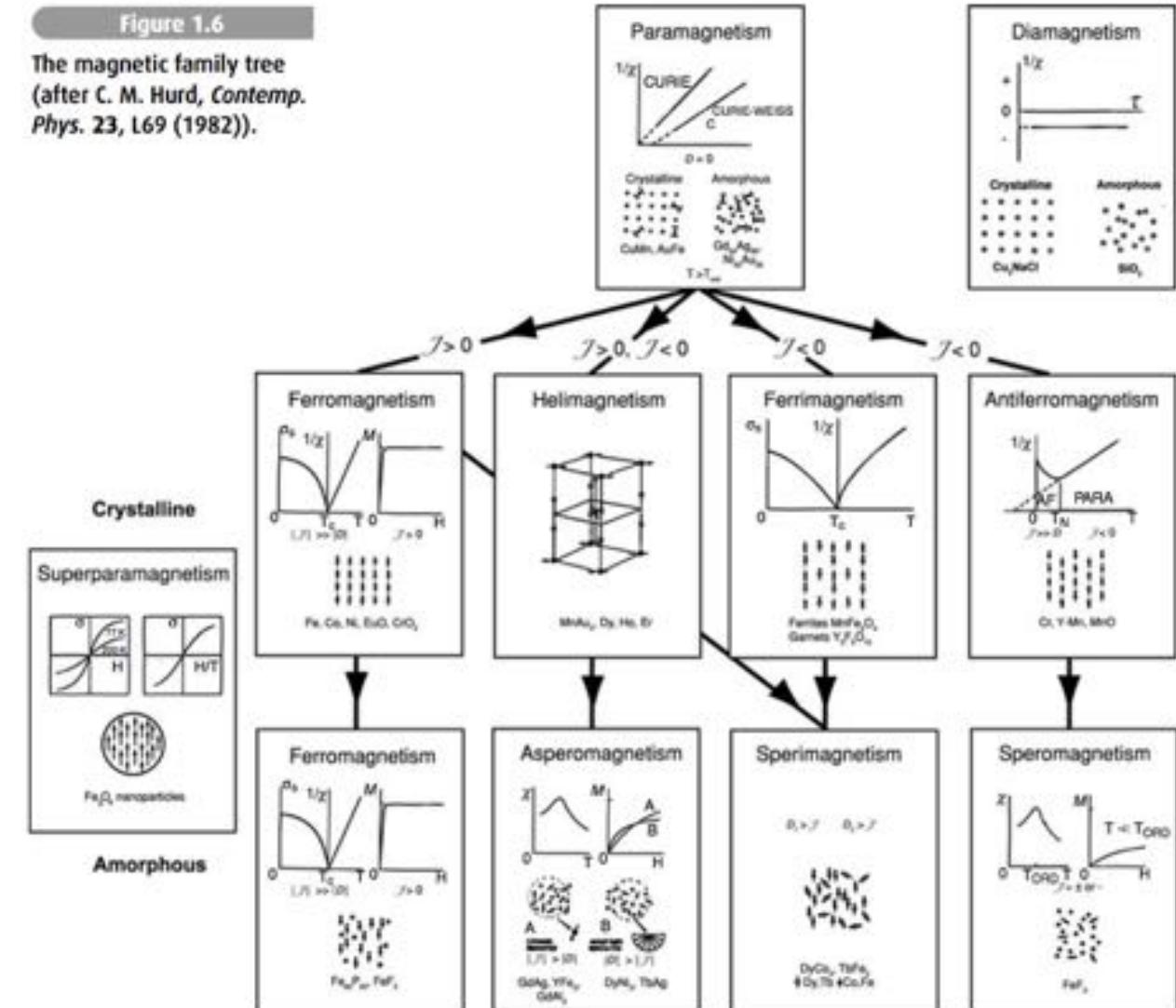
SALUD



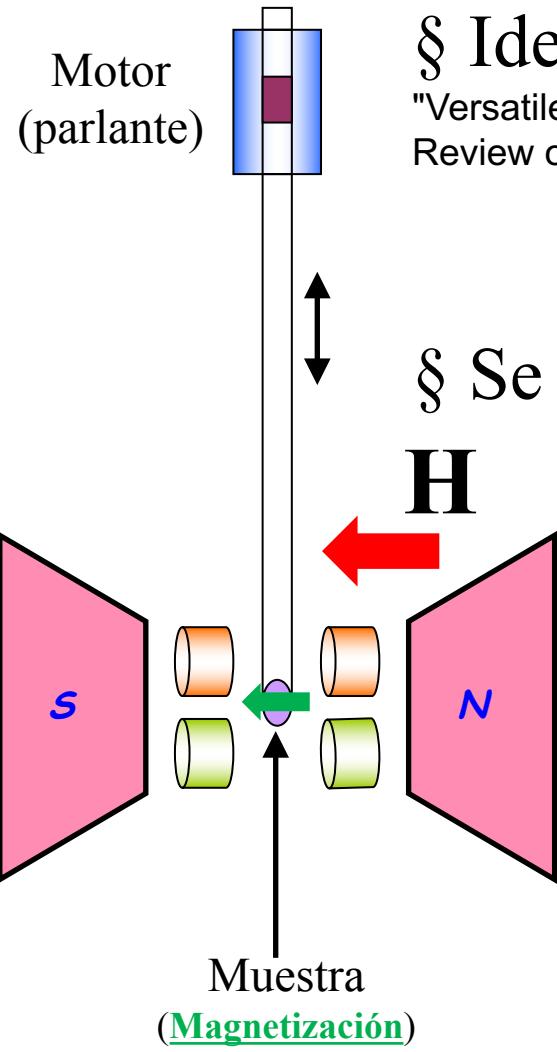
Magnetismo en la materia:

El origen reside en el movimiento orbital (**L**) y el espín (**S**) de los electrónes de un átomo → **J**

Figure 1.6
The magnetic family tree
(after C. M. Hurd, *Contemp. Phys.* 23, L69 (1982)).

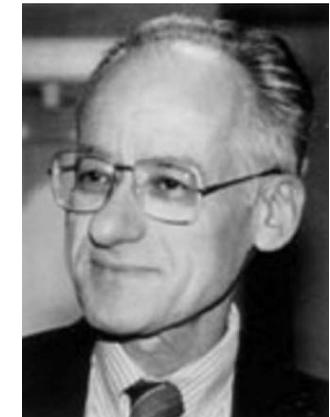


Magnetómetro de Muestra Vibrante (VSM)



§ Ideado por S. Foner en los 50's

"Versatile and Sensitive Vibrating-sample Magnetometer."
Review of Scientific Instruments, 30.7 (1959): 548-557



§ Se mueve la muestra en un campo uniforme.

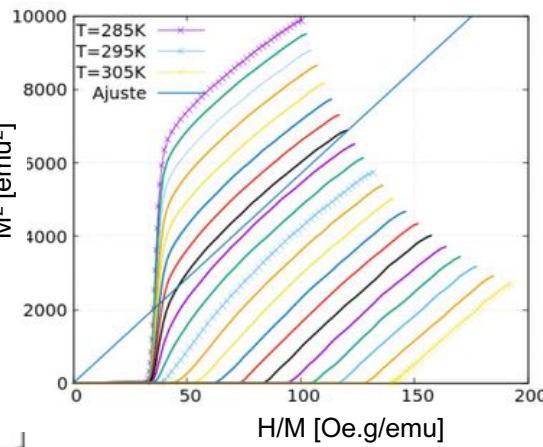
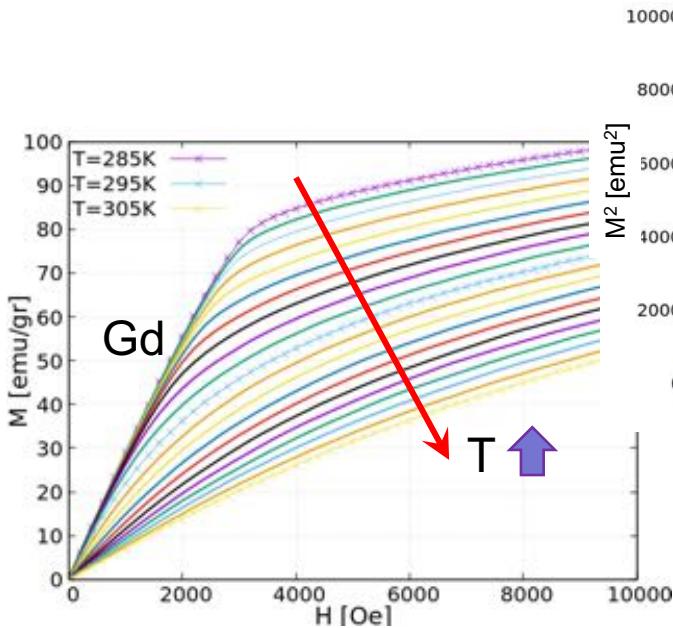
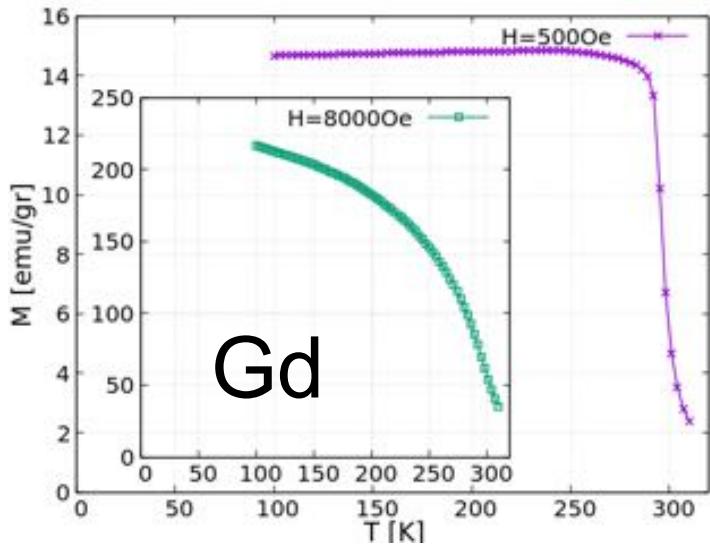
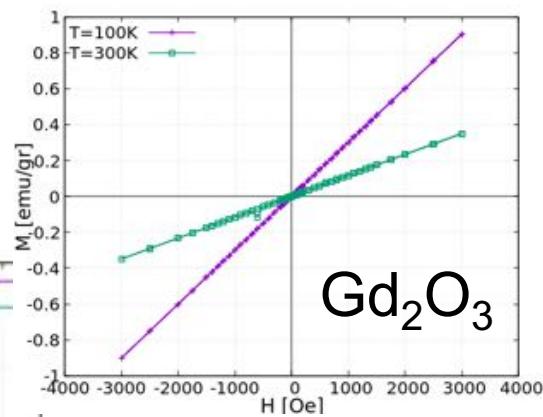
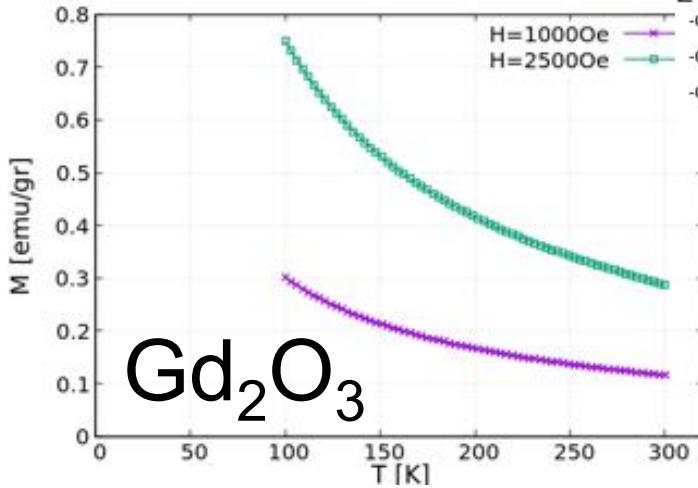
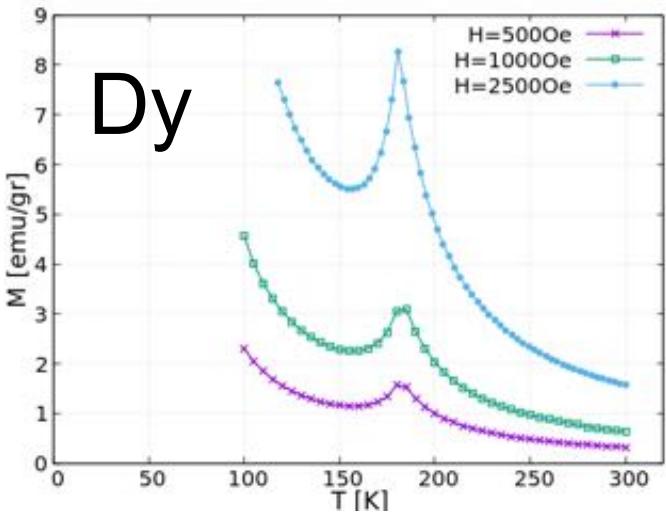
H

§ La señal es detectada
por un juego de bobinas

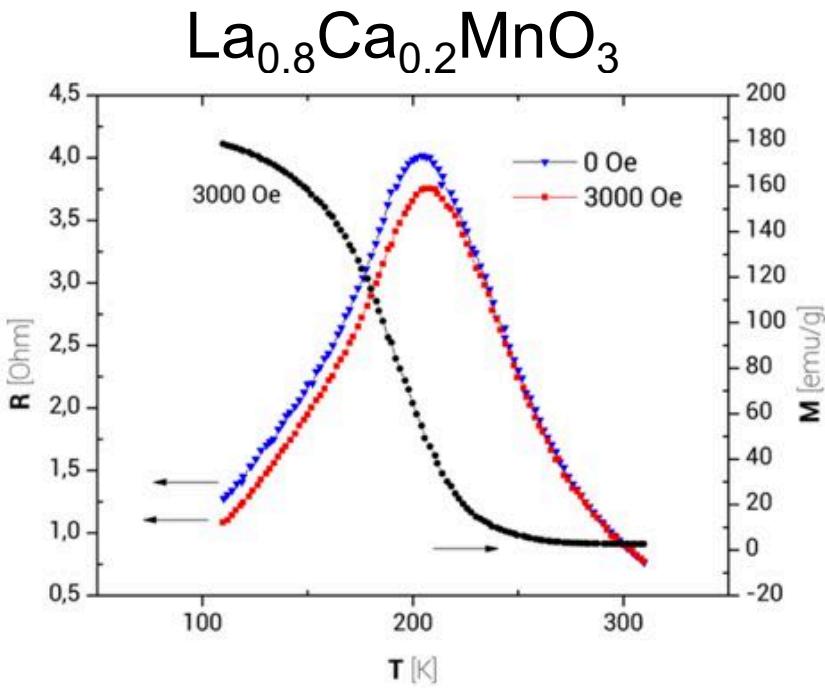
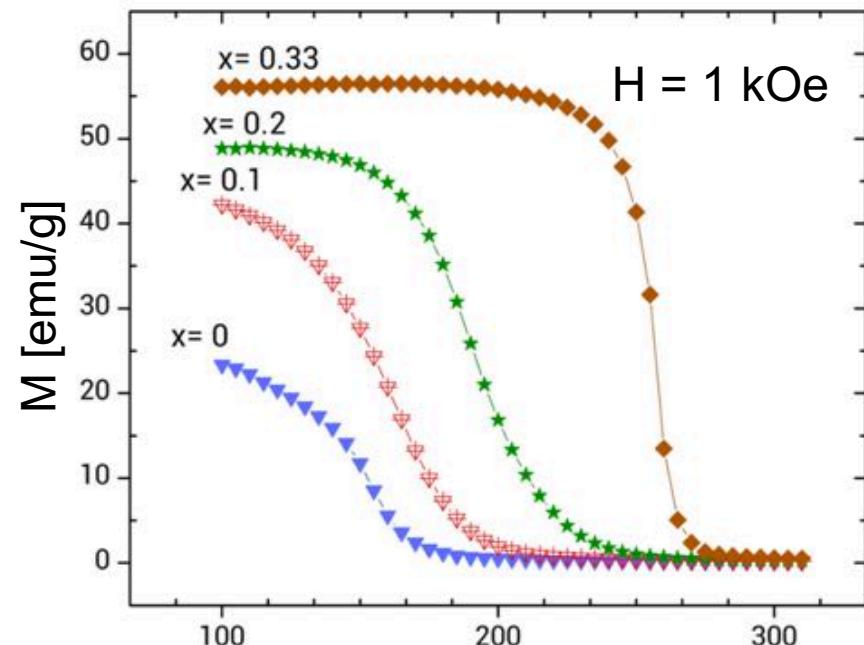
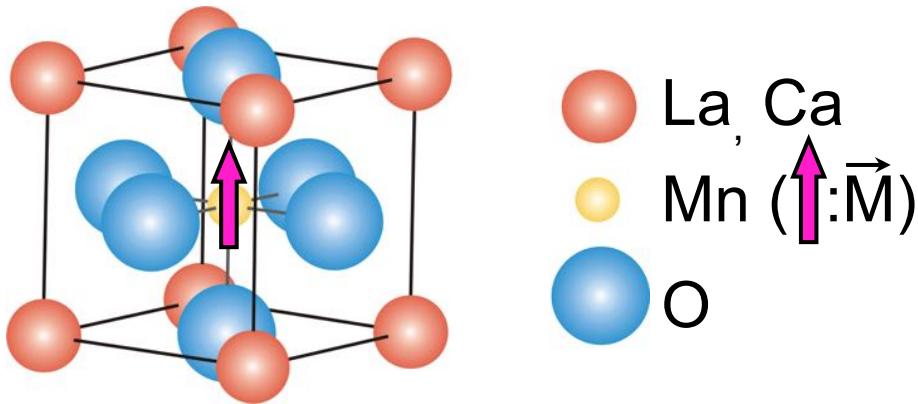
$$M \sim (d\phi/dt)$$

§ Se puede medir $M(H, T, t)$

Algunos ejemplos:



Algunos ejemplos:



Simonetto - González (2017)

