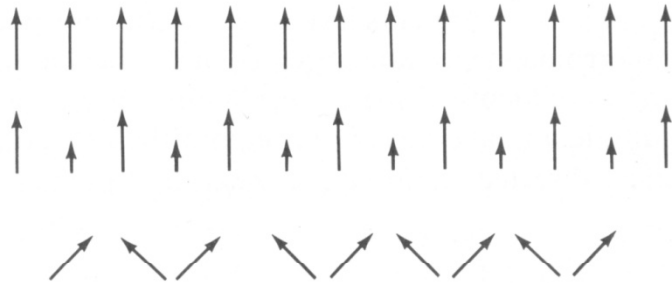


Ferromagnetismus

ferromagnetische Ordnung



Curie-Temperaturen

SELECTED FERROMAGNETS, WITH CRITICAL TEMPERATURES T_c AND SATURATION MAGNETIZATION M_0

MATERIAL	T_c (K)	M_0 (gauss) ^a
Fe	1043	1752
Co	1388	1446
Ni	627	510
Gd	293	1980
Dy	85	3000
CrBr ₃	37	270
Au ₂ MnAl	200	323
Cu ₂ MnAl	630	726
Cu ₂ MnIn	500	613
EuO	77	1910
EuS	16.5	1184
MnAs	318	870
MnBi	670	675
GdCl ₃	2.2	550

(Quelle: Ashcroft, Mermin,
Solid State Physics,
Saunders, Philadelphia)

^a At $T = 0$ (K).

Source: F. Keffer, *Handbuch der Physik*, vol. 18, pt. 2, Springer, New York, 1966; P. Heller, *Rep. Progr. Phys.*, **30**, (pt. II), 731 (1967).

Ferromagnetismus

Domänen in Nickel

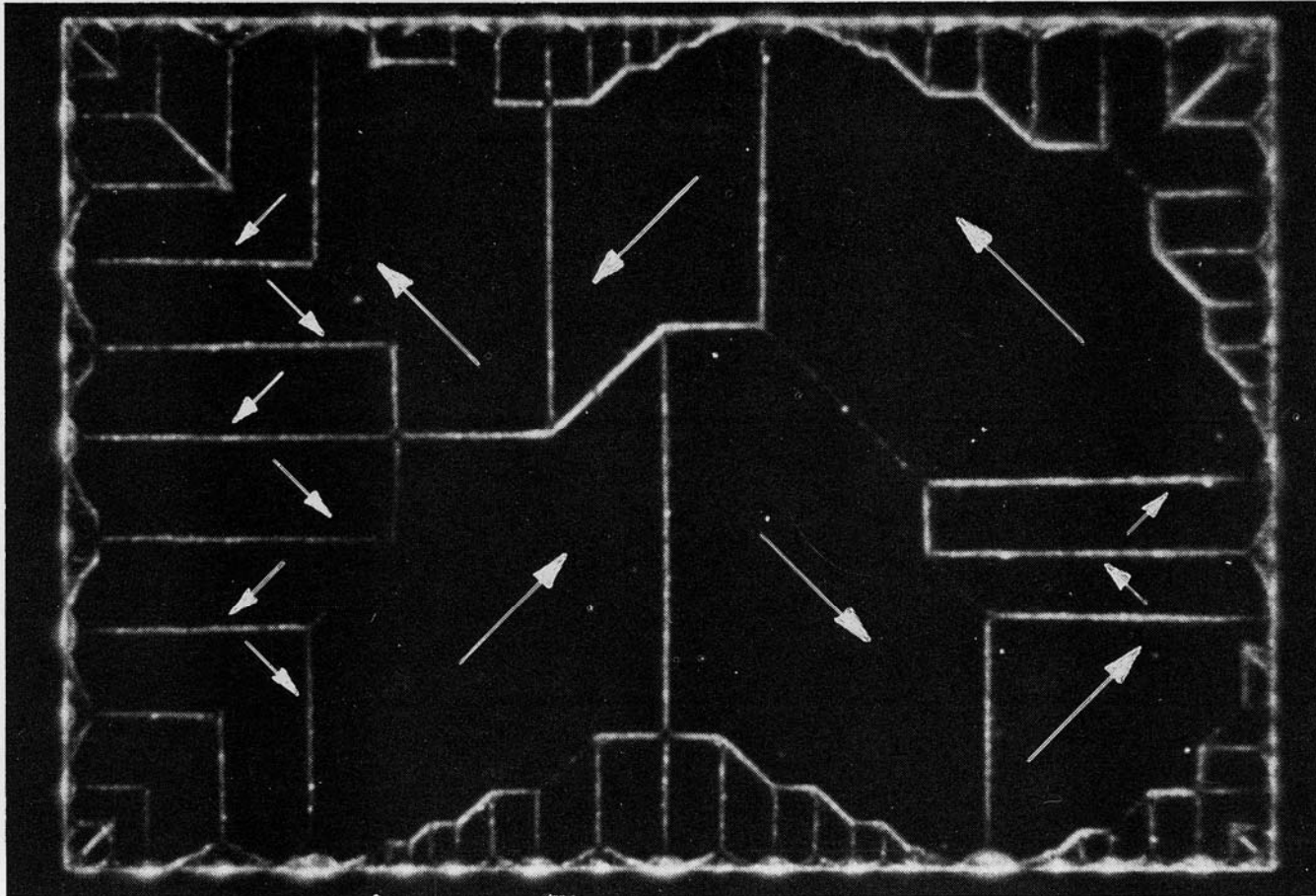


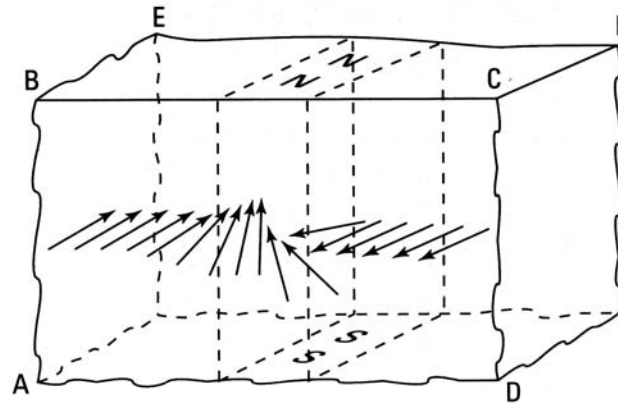
Figure 27 Ferromagnetic domain pattern on a single crystal platelet of nickel. The domain boundaries are made visible by the Bitter magnetic powder pattern technique. The direction of magnetization within a domain is determined by observing growth or contraction of the domain in a magnetic field. (After R. W. De Blois.)

(Quelle: Ch. Kittel, Introduction to Solid State Physics, Wiley, New York)

Ferromagnetismus

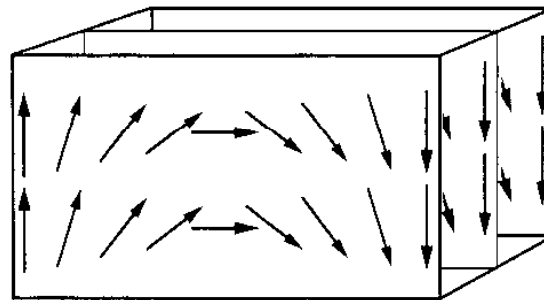
Domänenwände

Bloch-Wand



*(Quelle: Bergmann-Schaefer
Band 2, de Gruyter, Berlin)*

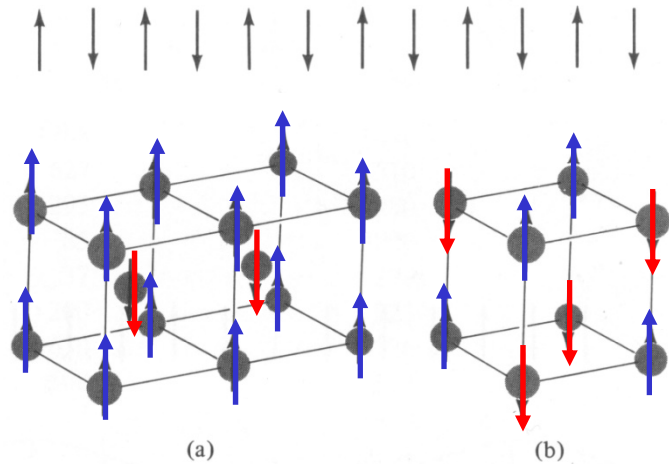
Néel-Wand



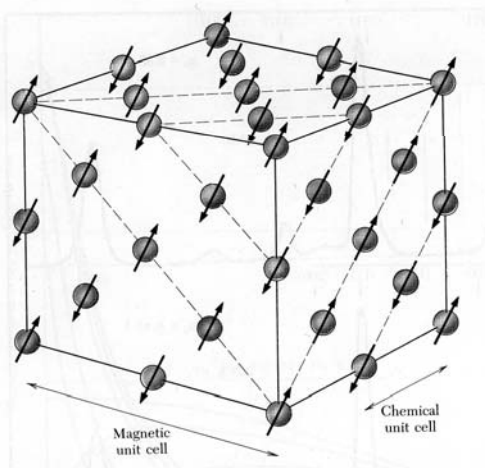
*(Quelle: Ashcroft, Mermin,
Solid State Physics, Saunders,
Philadelphia)*

Antiferromagnetismus

antiferromagnetische Ordnung



Ordnung in MnO



Néel-Temperaturen

SELECTED ANTIFERROMAGNETS, WITH CRITICAL TEMPERATURES T_c

MATERIAL	T_c (K)	MATERIAL	T_c (K)
MnO	122	KCoF ₃	125
FeO	198	MnF ₂	67.34
CoO	291	FeF ₂	78.4
NiO	600	CoF ₂	37.7
RbMnF ₃	54.5	MnCl ₂	2
KFeF ₃	115	VS	1040
KMnF ₃	88.3	Cr	311

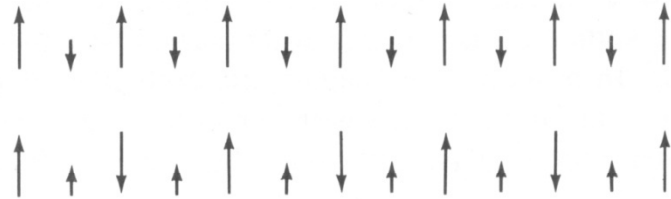
Source: F. Keffer, *Handbuch der Physik*, vol. 18, pt. 2, Springer, New York, 1966.

(Quelle: Ashcroft, Mermin, *Solid State Physics*, Saunders, Philadelphia)

(Quelle: Ch. Kittel, *Introduction to Solid State Physics*, Wiley, New York)

Ferrimagnetismus

ferrimagnetische Ordnung



Curie-Temperaturen

SELECTED FERRIMAGNETS, WITH CRITICAL TEMPERATURES T_c AND SATURATION MAGNETIZATION M_0

MATERIAL	T_c (K)	M_0 (gauss) ^a
Fe_3O_4 (magnetite)	858	510
CoFe_2O_4	793	475
NiFe_2O_4	858	300
CuFe_2O_4	728	160
MnFe_2O_4	573	560
$\text{Y}_3\text{Fe}_5\text{O}_{12}$ (YIG)	560	195

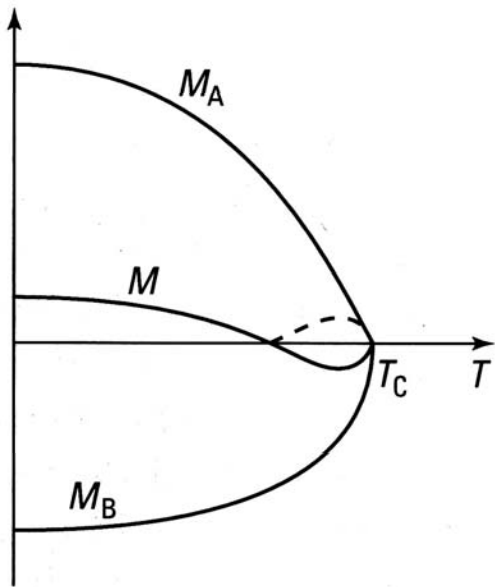
^a At $T = 0(\text{K})$.

Source: F. Keffer, *Handbuch der Physik*, vol. 18, pt. 2, Springer, New York, 1966.

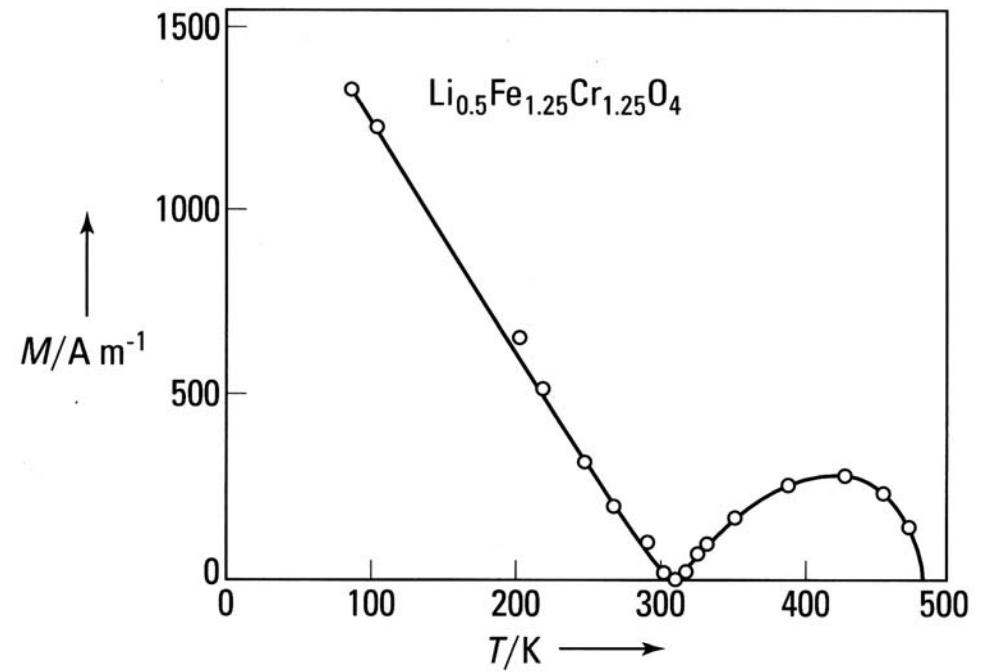
(Quelle: Ashcroft, Mermin, *Solid State Physics*, Saunders, Philadelphia)

Ferrimagnetismus

Kompensationspunkt



Magnetisierung von $\text{Li}_{0.5}\text{Fe}_{1.25}\text{Cr}_{1.25}\text{O}_4$



(Quelle: Bergmann-Schaefer Band 2, de Gruyter, Berlin)