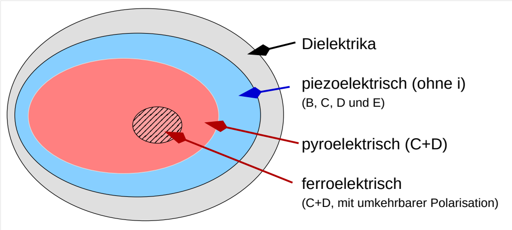
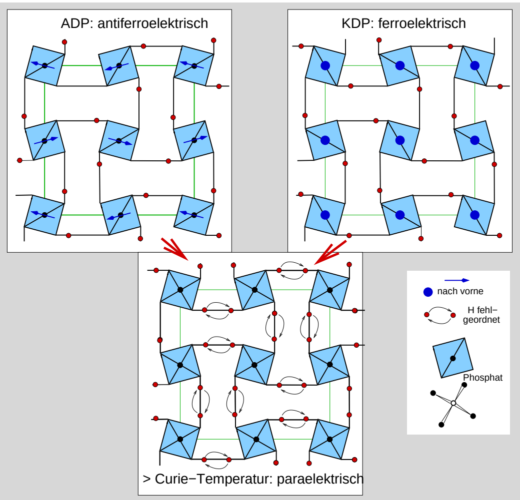
3.2. Polarisation: Beispiel Dielektrika



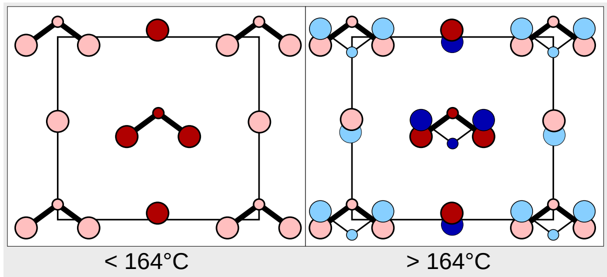
Kristallographische Voraussetzungen für besondere Effekte in Dielektrika

Verbindung	T_c[°C]	ferro	antiferro	ferri
$BaTiO_3$	120	x		
$KNbO_3$	434	x		
$NaNbO_3$	638		x	
$LiNbO_3$	1210	x		
$PbZrO_3$	233		x	
$Pb(Zr_xTi_{1-x})O_3$ (PZT)	-	x	x	
$Bi_4Ti_3O_{12}$	675			x
$Gd_2(MoO_4)_3$ (GMO)	159	x		
$NaNO_2$	164	x		
KH_2PO_4 (KDP)	-150	x		
$NH_4H_2PO_4$ (ADP)	-125		x	

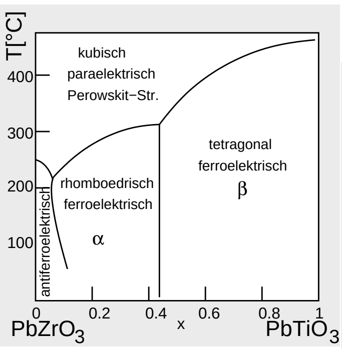
Ferro-, Antiferro- und Ferrielektrika



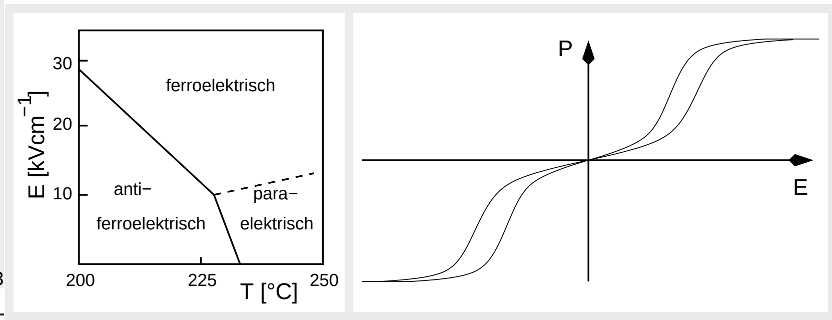
ferro- (KH_2PO_4, KDP) und antiferro-($NH_4H_2PO_4$, ADP) Elektrika



$NaNO_2$

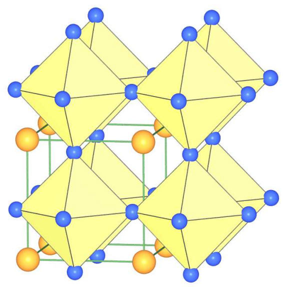


Phasendiagramm des PZT-Systems

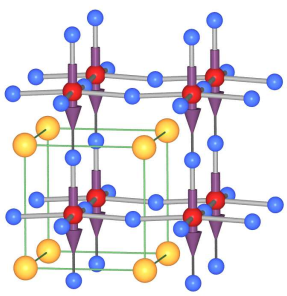


Antiferro-ferroelektrischer Übergang von $PbZrO_3$

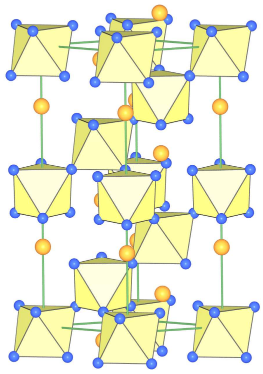
Materialien: Oxide mit MO_6-Oktaedern



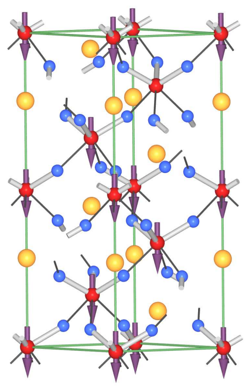
$BaTiO_3$ (Polyederdarstellung)



$BaTiO_3$ (mit Andeutung der Polarisation)



$LiNbO_3$ (Polyederdarstellung)



$LiNbO_3$ (mit Polarisation)