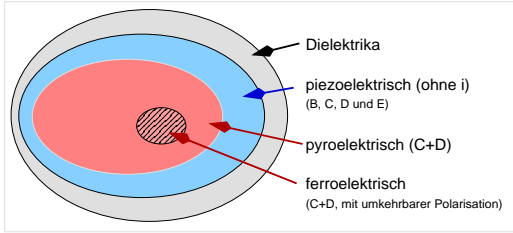


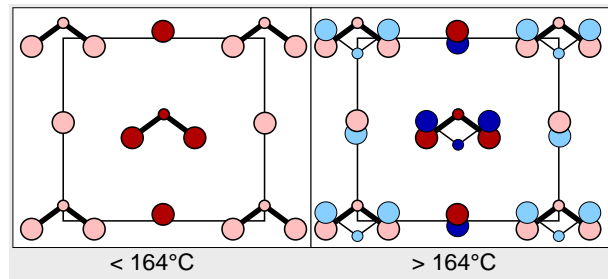
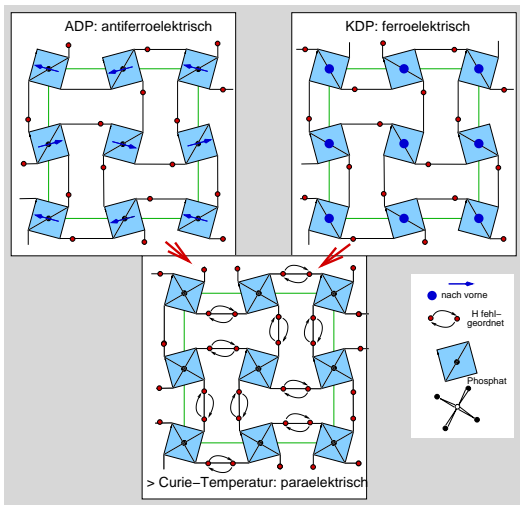
3.2. Polarisierung: Beispiel Dielektrika



Kristallographische Voraussetzungen für besondere Effekte in Dielektrika

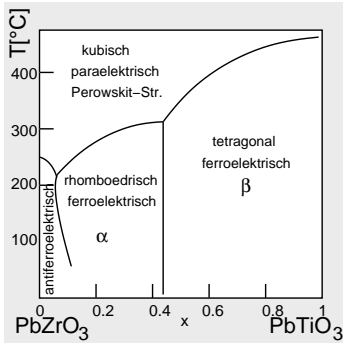
Verbindung	T <sub>c</sub> [°C]	ferro	antiferro	ferri
BaTiO <sub>3</sub>	120	x		
KNbO <sub>3</sub>	434	x		
NaNbO <sub>3</sub>	638		x	
LiNbO <sub>3</sub>	1210	x		
PbZrO <sub>3</sub>	233		x	
Pb(Zr <sub>x</sub> Ti <sub>1-x</sub> )O <sub>3</sub> (PZT)	-	x	x	
Bi <sub>4</sub> Ti <sub>3</sub> O <sub>12</sub>	675			x
Gd <sub>2</sub> (MoO <sub>4</sub> ) <sub>3</sub> (GMO)	159	x		
NaNO <sub>2</sub>	164	x		
KH <sub>2</sub> PO <sub>4</sub> (KDP)	-150	x		
NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> (ADP)	-125		x	

Ferro-, Antiferro- und Ferrielektrika

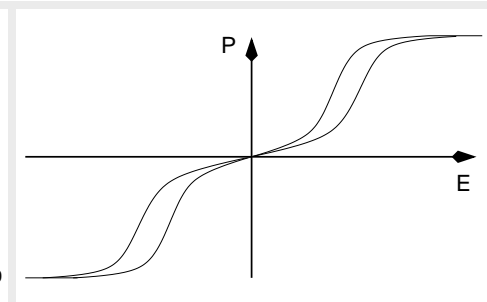
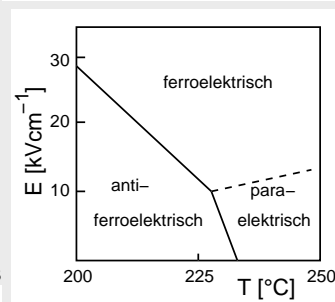


NaNO<sub>2</sub>

ferro- (KH<sub>2</sub>PO<sub>4</sub>, KDP) und antiferro- (NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>, ADP) Elektrika

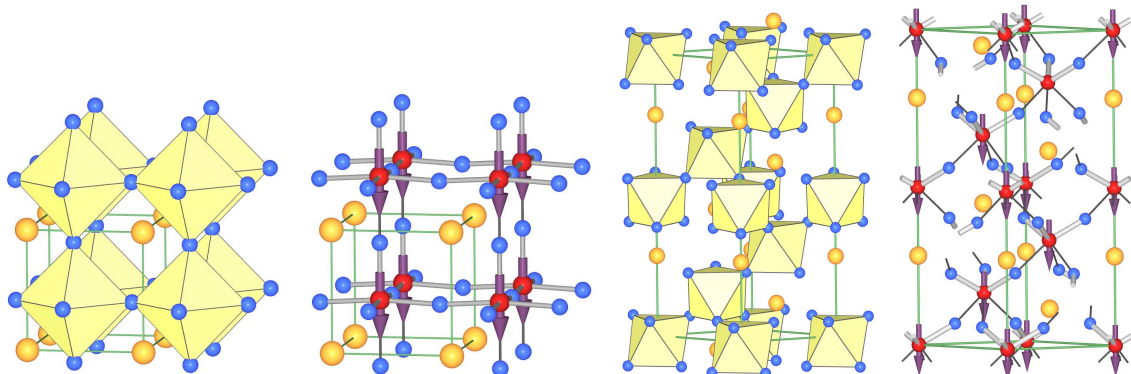


Phasendiagramm des PZT-Systems



Antiferro-ferroelektrischer Übergang von PbZrO<sub>3</sub>

Materialien: Oxide mit MO<sub>6</sub>-Oktaedern



BaTiO<sub>3</sub> (Polyederdarstellung)

BaTiO<sub>3</sub> (mit Andeutung der Polarisation)

LiNbO<sub>3</sub> (Polyederdarstellung)

LiNbO<sub>3</sub> (mit Polarisation)