Temperature-dependent phase transitions in crystals

Molecule	Temperature	Phase change			Crystallization
KBH_4	**77K**	$F4_3m$ to Fm3m	Potassium borohydride	Commercially available (Sigma)	From water a < 5C http://journals.iucr.org/q/issues/1954/08-09/00/a01253/a01253.pdf
$C_{14}H_{10}O_2$	**84K**	$P2_1$ to $P3_121$	Benzil (diphenylethanedione)	Commercially available	Dissolve in hot ethanol (95%), add water dropwise to reach cloud point. Allow to slowly crystallize
$[N(CH_3)_4]_2MnCl_4$	*90K* *171K* *268K* *291K*	$P2_12_12_1$ to $P12_1/c_1$ to P112/n to $P2_1/c11$ to Pmcm			
$(NH_3CH_3)_2FeCl_4$	**96K** **233K**	$P2_1/a$ to $P4_2/mcm$ to Cmca			
CsDS	*100K* *210K*	I4/m to P4/mbm to Pm3m			
$Rb_4LiH_3(SeO_4)_4$	*101K*	$P2_1$ to $P4_1$			
$N(CH_3)_4CdCl_3$	**104K** **118K**	$P2_1/b$ to $P2_1/3$ to $P6_3/m$	tetramethylammonium trichlorocadmate(II)		http://journals.iucr.org/b/issues/2000/02/00/na0098/na0098.pdf
RbH_2AsO_4	*110K*	Fdd2 to I42d			
Na_2CO_3	**120K**	P2/c to P(C2/m)/(is)	Sodium carbonate		http://journals.iucr.org/b/issues/1969/12/00/a07035/a07035.pdf
$SrMo_6S_8$	**125K**	P1 to R3			
Rb_2CdCl_4	**133K**	C2/a to I4/mmm			
$NH_3CH_3PbBr_3$	**149K** **154K** **236K**	$Pma2_1$ to P4/mm to I4/mcm to cubic			
$NH_3CH_3PbCl_3$	**171K** **177K**	P222 to P4/mm to Pm3m			
$(NH_4)3AlF_6$	**224K**	$P2_1/n$ to Fm3m	Ammonium hexafluoroaluminate	Commercially avaiable	
NaN_3	293K	C2/m to R3m			

Table 2. Sample, temperature and space group transition. Bold indicates cryostat or cold finger temperature control (accurate value). No detail is given for cases in italics and they will be verified using the values in bold.

Derived by Eddie Snell from:

Tomaszewski, P.E.: Structural Phase Transitions in Crystals, I. Database, in: Phase Transitions 38(1992)3,127-221