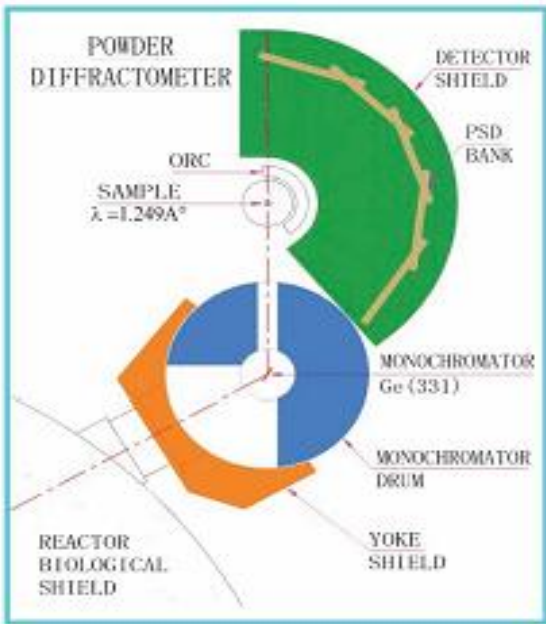


Powder Diffractometer (PD-2)



Instrumental details



Sample Environment Available:

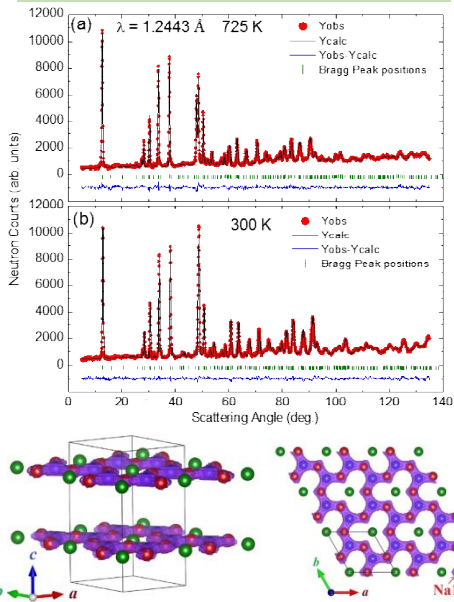
CCR (4 K – 300 K) Furnace (300 K – 1400 K)
Magnet (2 K – 300 K) and (0 – 7 T) Pressure (10^{-4} GPa – 2.5 Gpa)

Instrument Details

• Beam Hole	• T-1013
• Monochromator	• Ge (331)
• Flux at sample • (n/cm ² /sec)	• 8.5×10^5 ($\lambda = 1.2443 \text{ \AA}$)
• Sample size	• 40 mm high & • 5-10 mm dia
• Scattering angle	• $4^\circ < 2\theta < 140^\circ$
• Detector	• 5 (1-d PSDs) • at 5 positions
• Q range	• $0.4 - 9.4 \text{ \AA}^{-1}$
• $\Delta d/d$	• 0.8 %

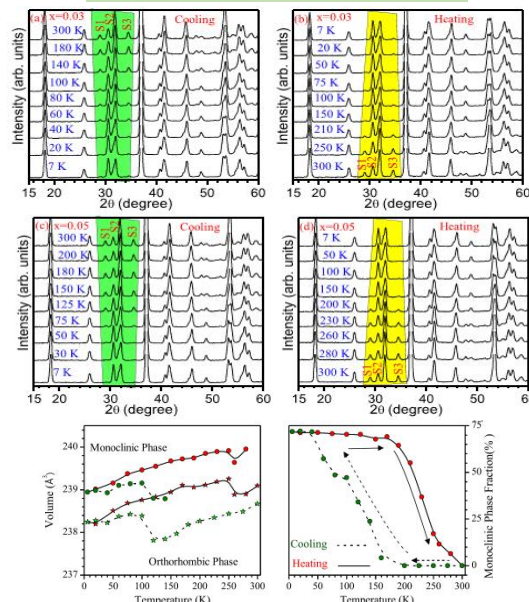
Recent Experimental Results

Na-Ion Conduction Pathways in the Layered Battery Material $\text{Na}_2\text{Ni}_2\text{TeO}_6$



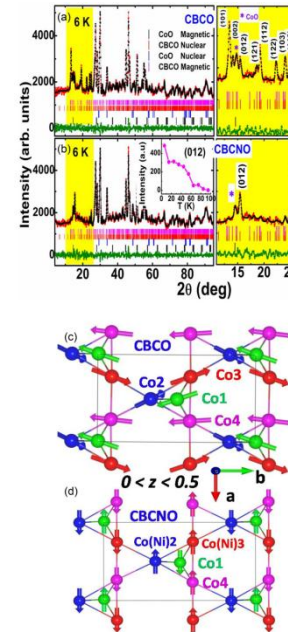
J. Phys. Chem. C 124, 4421 (2020)

Functional Monoclinic Phase in $(1-x)\text{NaNbO}_3-x\text{BaTiO}_3$



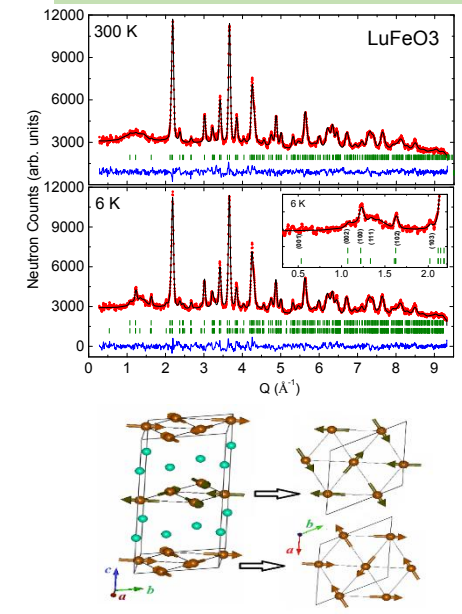
Appl. Phys. Lett. 112, 182905 (2018)

Magnetism of Ni-doped $\text{CaBaCo}_4\text{O}_7$



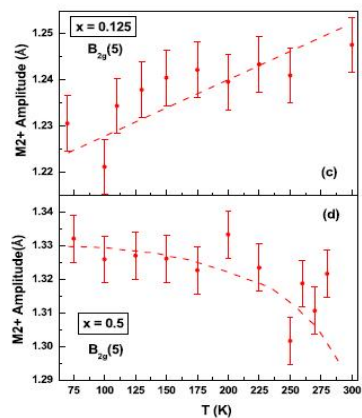
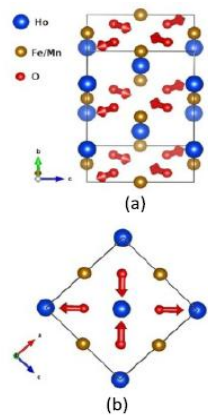
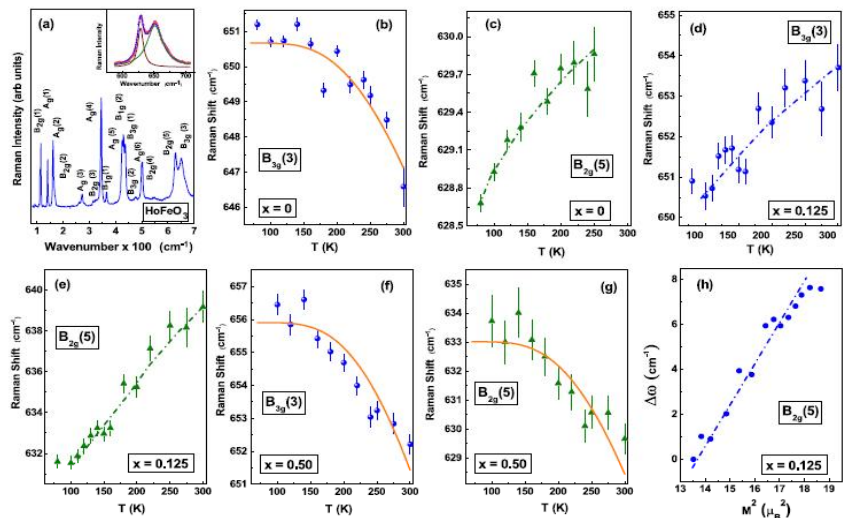
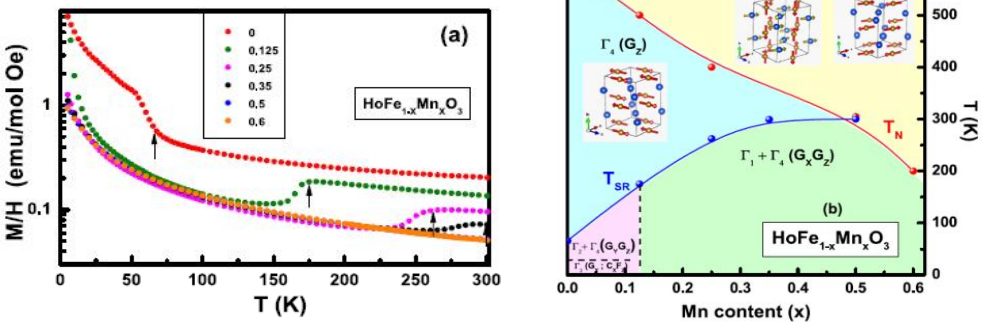
Phys. Rev. B 96, 134413 (2017)

Magnetic ground state of the multiferroic hexagonal LuFeO_3



Phys. Rev. B 97, 184419 (2018)

Spin phonon coupling in Mn doped HoFeO₃ compounds exhibiting spin reorientation behaviour



Switching from pyroelectric to ferroelectric order in Ni-doped CaBaCo₄O₇

