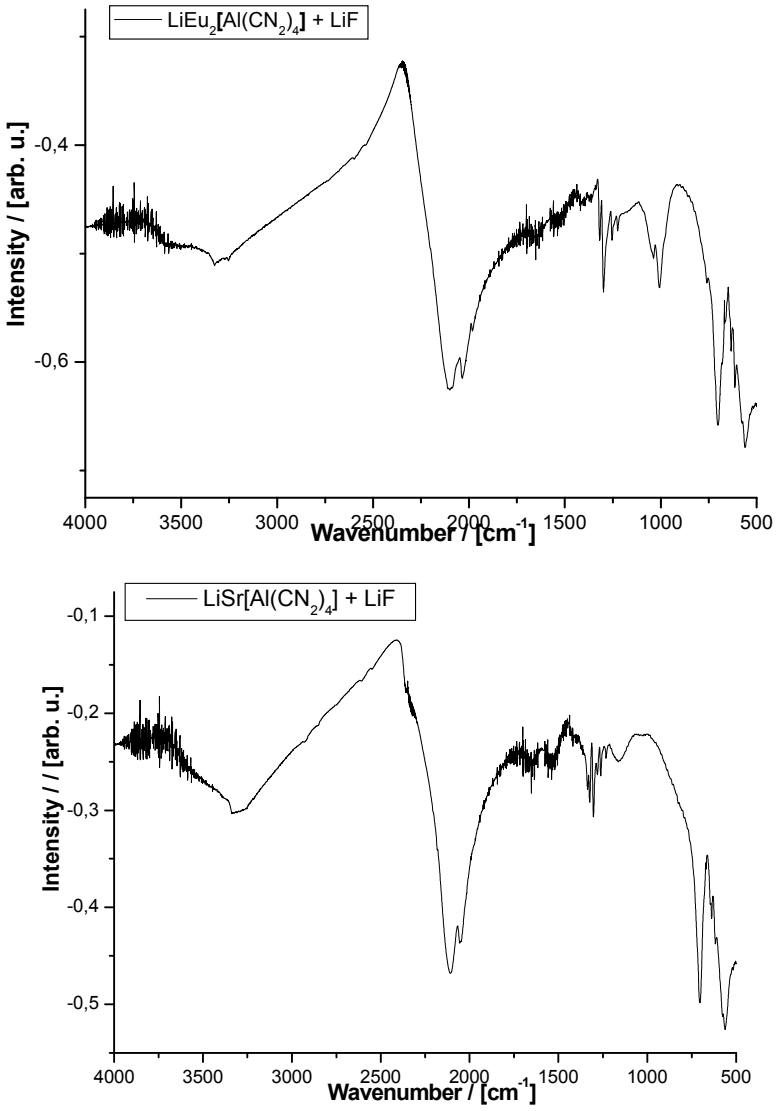
Strobele, Meyer et al., Dalton Trans., 2011
DOI: 10.1039/c1dt10711a

IR - Spectroscopic examination



wavenumber [cm^{-1}] **$LiEu_2[Al(CN_2)_4]$**	***wavenumber [cm^{-1}]*** ***$LiSr_2[Al(CN_2)_4]$***	***vibrational modes***
2036	2047	$\nu_{as}(N-C-N)$
1298	1302	$\nu_{s}(N-C-N)$
613 / 635	616 / 637	$\delta(N-C-N)$
1224 / 1254	1232 / 1261	$2\delta(N-C-N)$
3326	3338	$\nu_{as}+\nu_{s}(N-C-N)$
3255	3253	$\nu_{as}+2\delta(N-C-N)$
561 / 703	562 / 702	$\delta(Al-N)$

Characteristic IR-vibrations of $LiEu_2[Al(CN_2)_4]$ and $LiSr_2[Al(CN_2)_4]$

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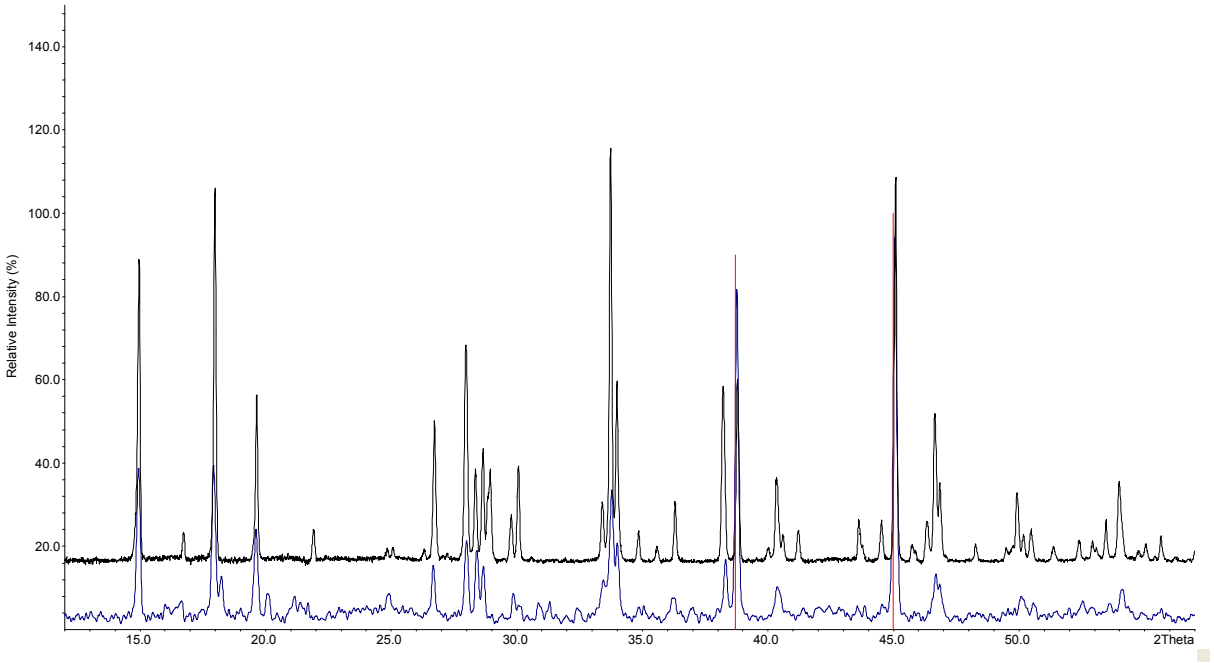
X-Ray Powder diffraction



Powderpattern of the products from the solid-state metathesis reaction departing from EuF_2 (lower graph) or SrF_2 (upper graph), AlF_3 and Li_2CN_2 in 2:1:4 molar ratio. The red lines indicate the powderpattern of LiF taken from the PDF - Database.

	$LiSr_2[Al(CN_2)_4]$ (Powderdiffraction)	**$LiEu_2[Al(CN_2)_4]$** (single crystal diffraction)
Lattice parameters	a = 7,2311(1) Å b = 19,833(3) Å c = 7,2415(1) Å β = 119,360(1) °	a = 7,224(2) Å b = 19,804(4) Å c = 7,226(2) Å β = 119,47(3) °
Volume	905,2(4) $Å^3$	900,0(4) $Å^3$
Indexed reflections	39	-
FOM	54,5	-
Spacegroup	C 2/c (no. 15)	C 2/c (No. 15)

Comparison of lattice parameters of LiSr2[Al(CN2)4] and LiEu2[Al(CN2)4].