Electronic Supplementary Material (ESI) for Dalton Transactions.

Supplementary Information for the article "**New amidinate complexes of indium(III): Promising CVD precursors for transparent and conductive In_2O_3 thin films**"

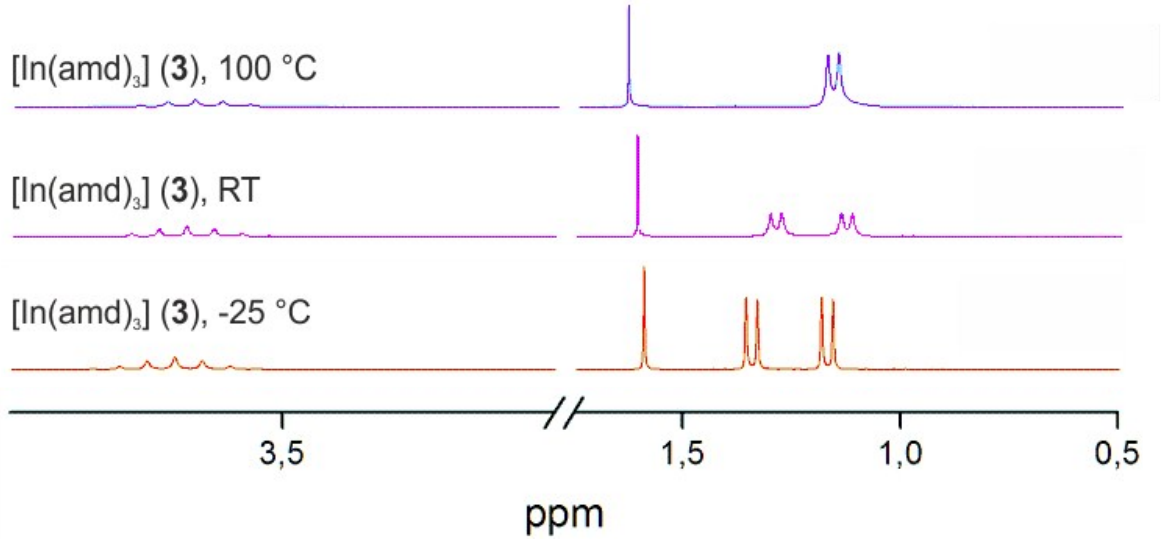
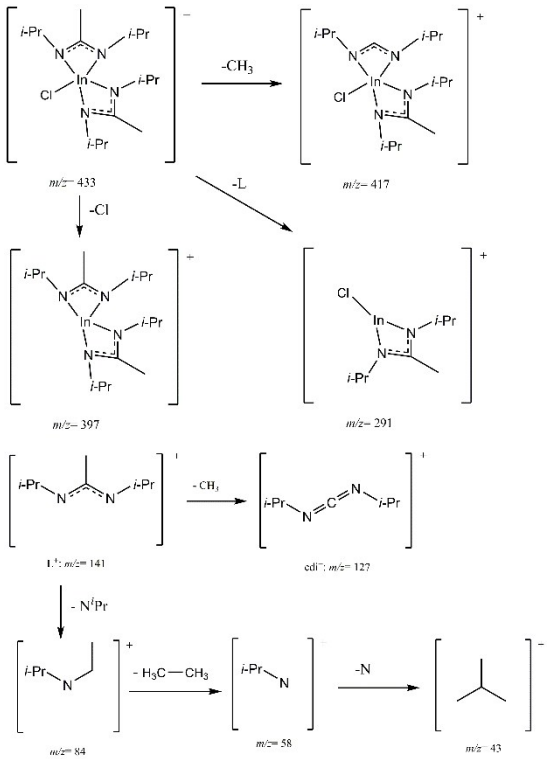


Figure S1: Temperature-dependent ^{1}H-NMR of compound **2**, [InMe(amd)$_2$].

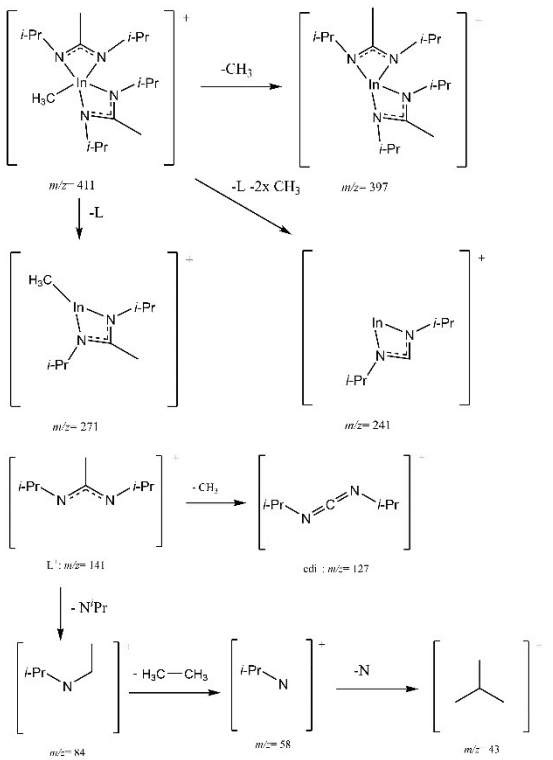
Table S1: Overview of the fragments of complexes 1, 2 and 3 observed from EI-MS analysis.

	1		2		3	
Fragment	Mass (m/z)	Rel. Int. (%)	Mass (m/z)	Rel. Int. (%)	Mass (m/z)	Rel. Int. (%)
M^+	433	7	411	n.d.	538	n.d.
M^+ -CH_3	417	10	397	13	523	n.d.
M^+ -Cl	397	32				
M^+ -L	291	22	271	100	396	n.d.
M^+- L- 2x CH_3			241	18		
L^+	141	100	141	46	142	24
cdi	127	3	127	n.d.	127	8
L- ^{i}Pr					99	5
L- N^{i}Pr	84	76	84	77	84	13
L-N^{i}Pr- CH_3					70	15
N^{i}Pr$^+$	58	17	58	15	58	63
^{i}Pr$^+$	43	18	43	20	42	100
CH_2-CH_3^+					28	25

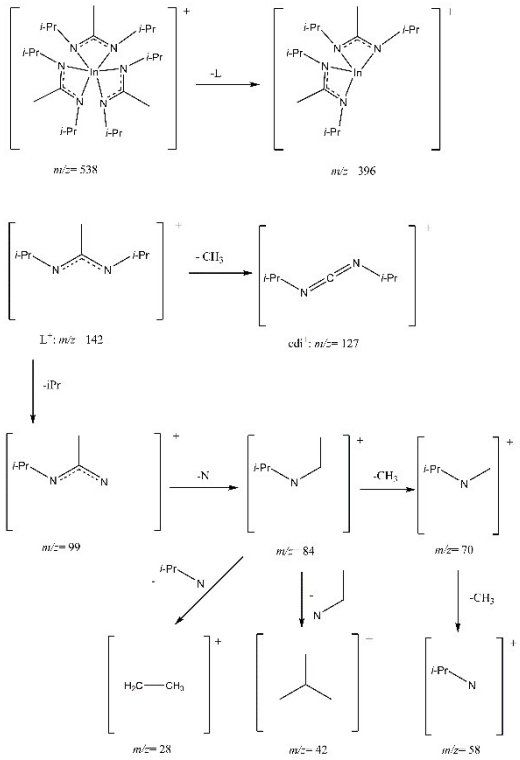
M^+= molecular ion. L= $(N^iPr)_2CCH_3$. n.d. = not detected.



Scheme S1: Proposed fragmentation pattern for compound **1**, [InCl(amd)$_2$].



Scheme S2: Proposed fragmentation pattern for compound **2**, [InMe(amd)$_2$].



Scheme S 3: Proposed fragmentation pattern for compound **3**, $[In(amd)_3]$.

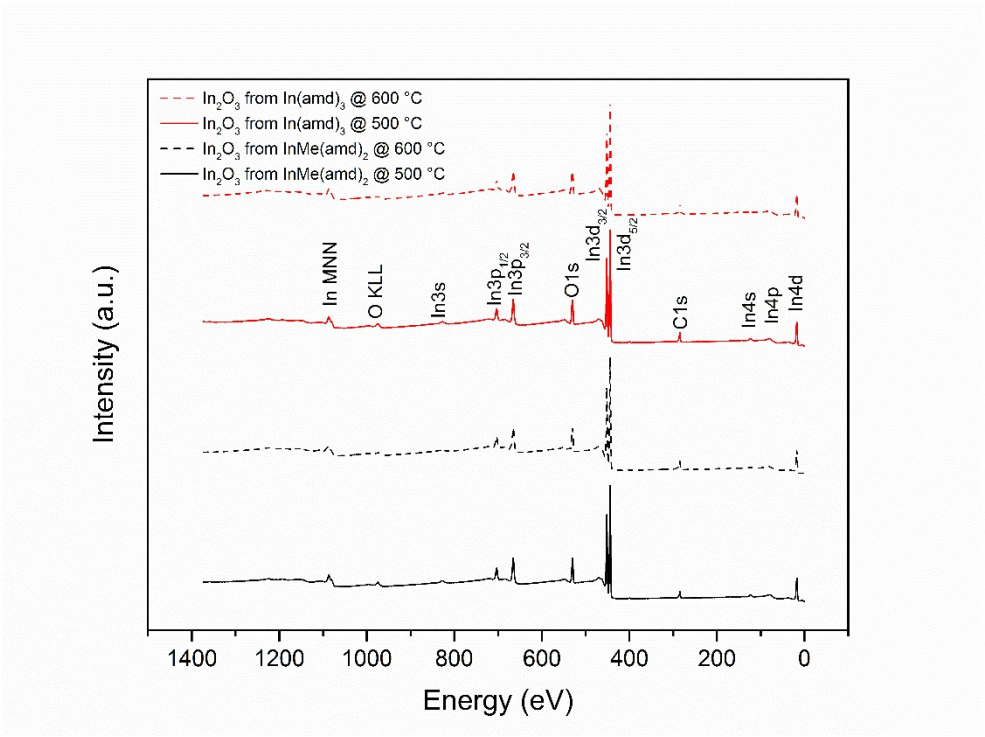


Figure S 2: XPS survey spectra (as received) of In_2O_3 thin films deposited at different temperatures using precursor compounds **2** and **3**.

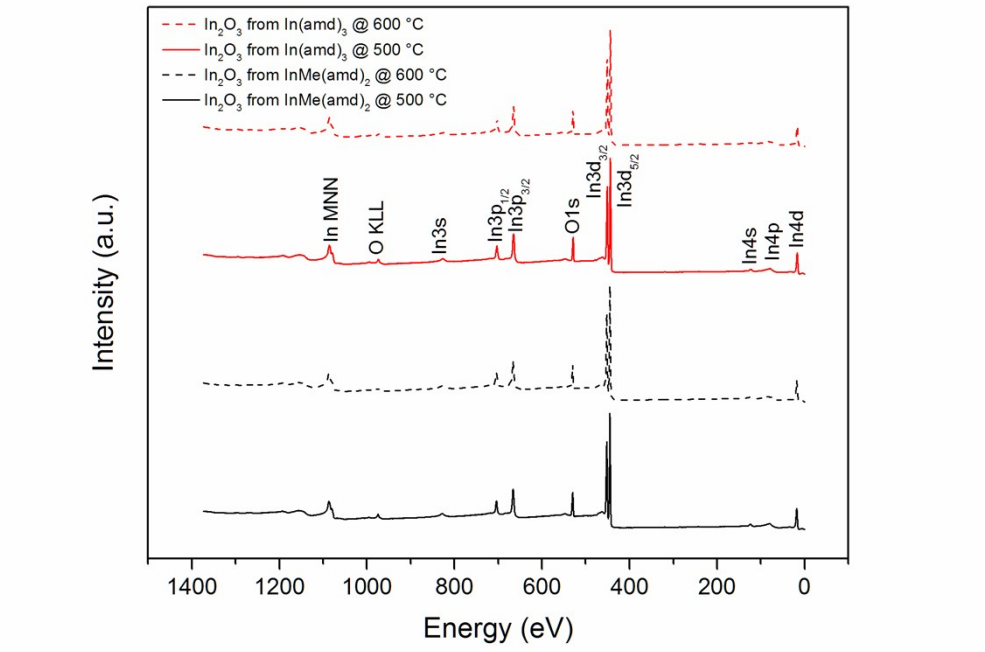


Figure S 3: XPS survey spectra after sputtering of In_2O_3 thin films deposited at different temperatures using precursor compounds **2** and **3**.