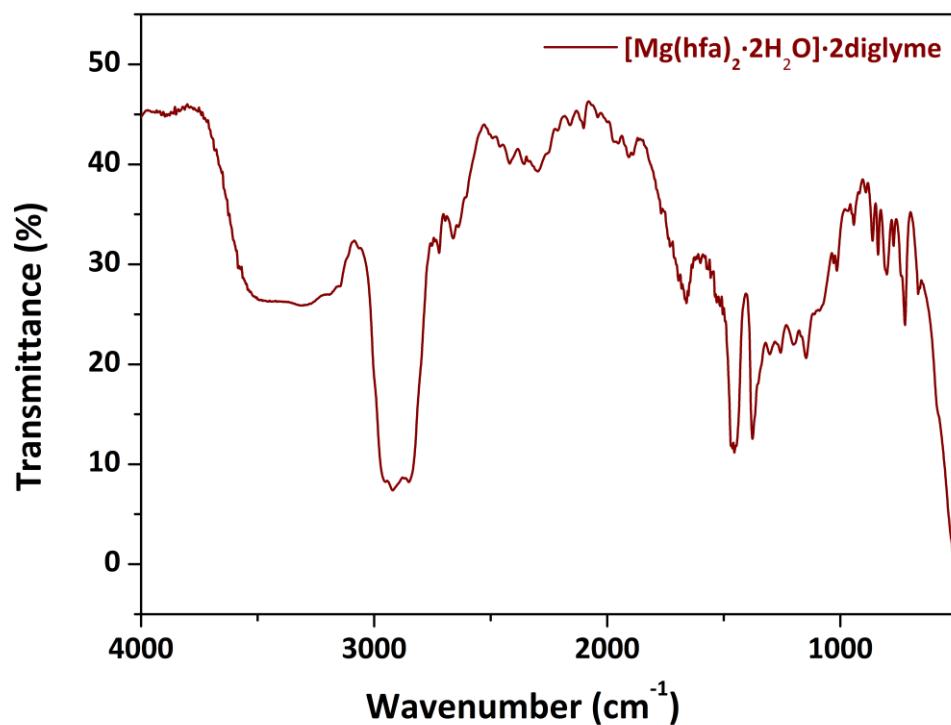


## ELECTRONIC SUPPORTING INFORMATION

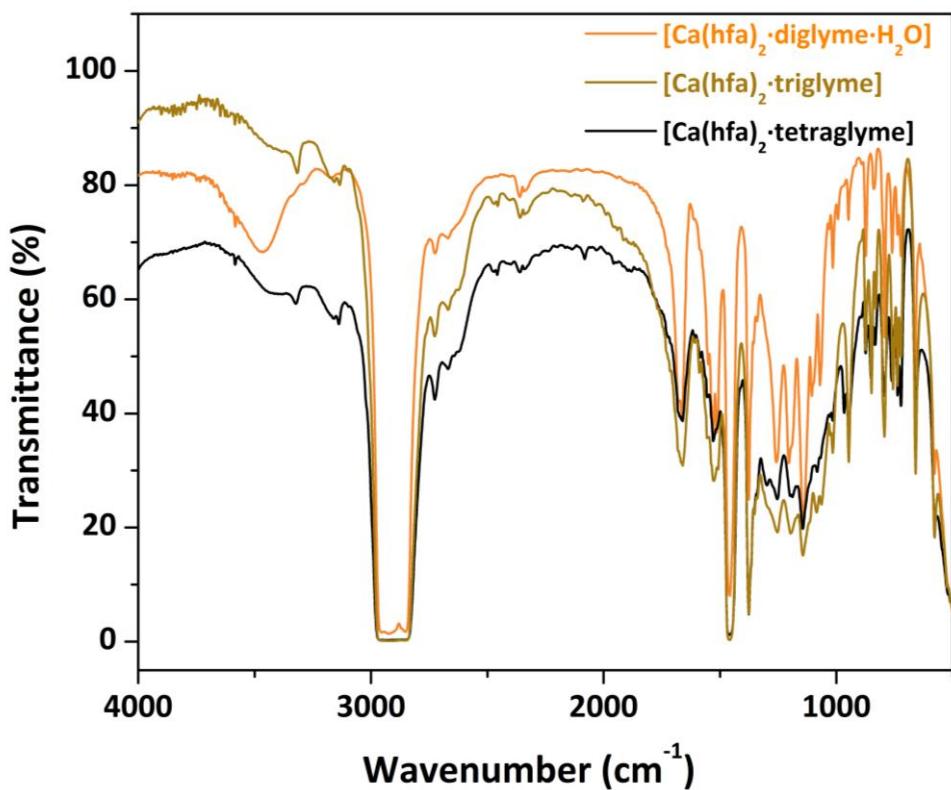
### Journey of a molecule from the solid to the gas phase and vice-versa: direct estimation of vapor pressure of alkaline-earth metalorganic precursors for atmospheric pressure vapor phase deposition of fluoride films

*Francesca Lo Presti, Anna L. Pellegrino and Graziella Malandrino\**

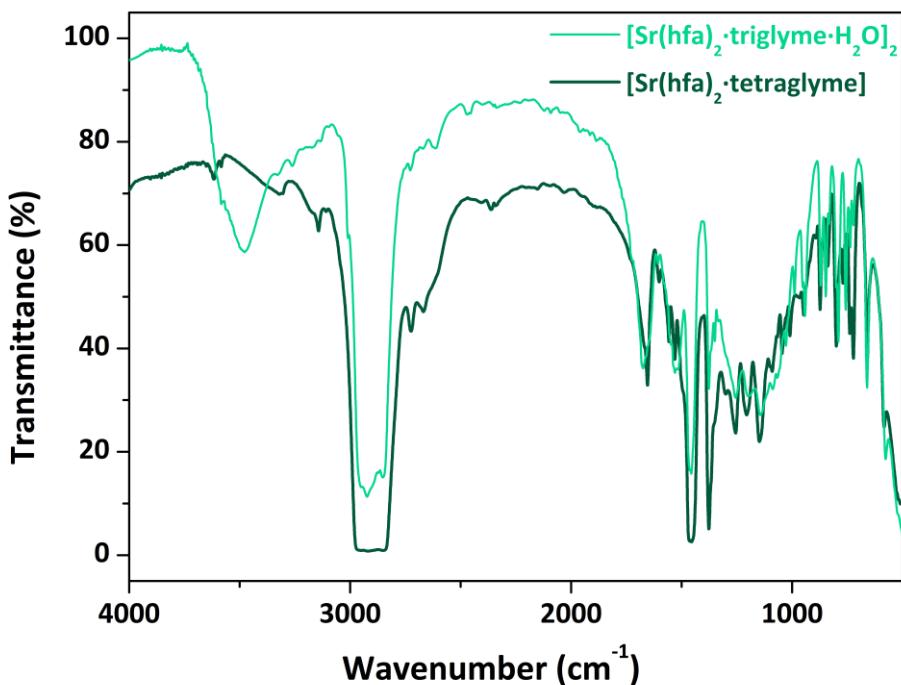
Dipartimento di Scienze Chimiche, Università degli Studi di Catania, INSTM UdR Catania, Viale Andrea Doria 6, I-95125 Catania, Italy;  
E-mail: [graziella.malandrino@unict.it](mailto:graziella.malandrino@unict.it)



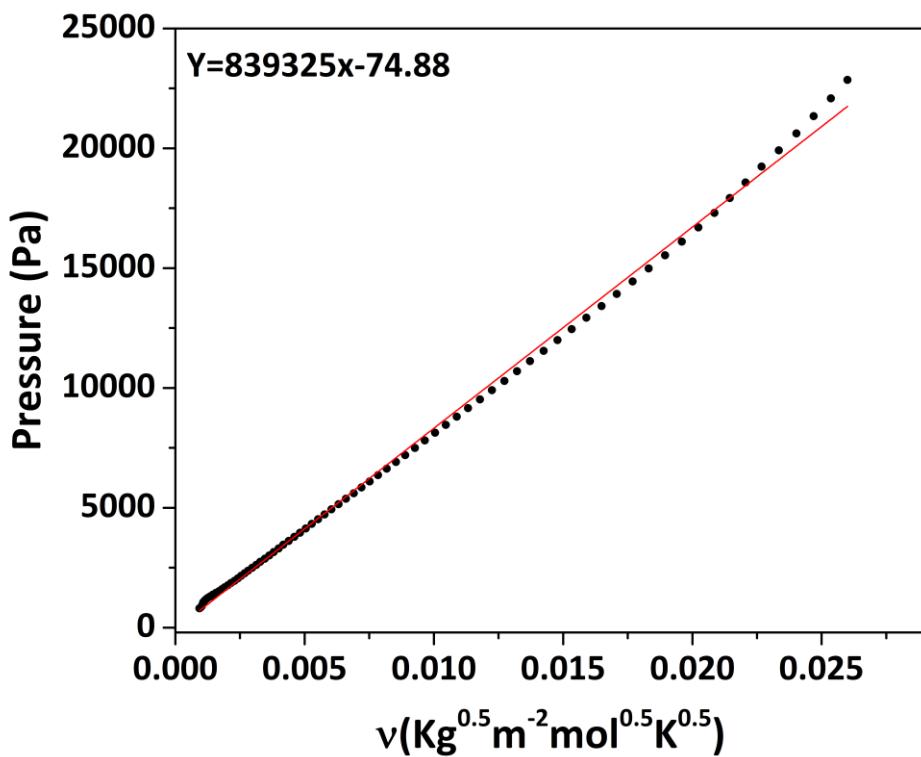
**Fig. S1.** FT-IR spectrum of the Mg adduct with the diglyme,  $[\text{Mg}(\text{hfa})_2 \cdot 2\text{H}_2\text{O}] \cdot 2\text{diglyme}$ .



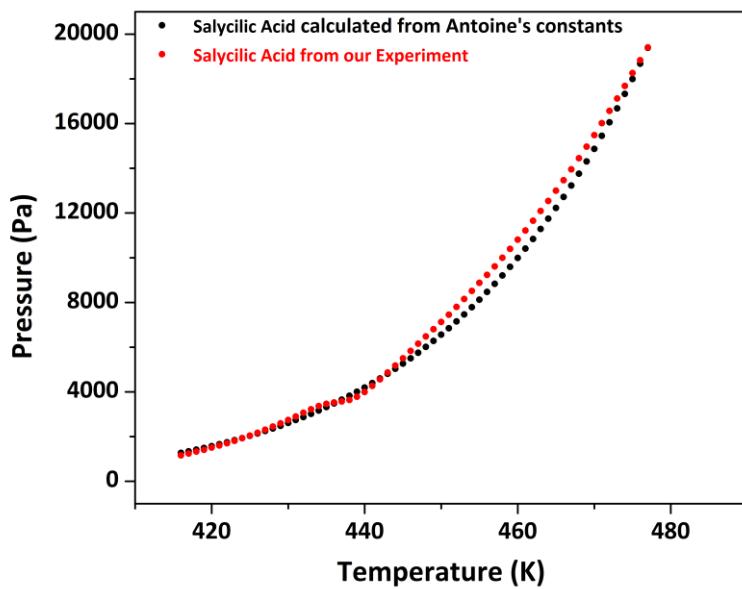
**Fig. S2.** FT-IR spectra of the Ca adducts with diglyme, triglyme and tetraglyme.



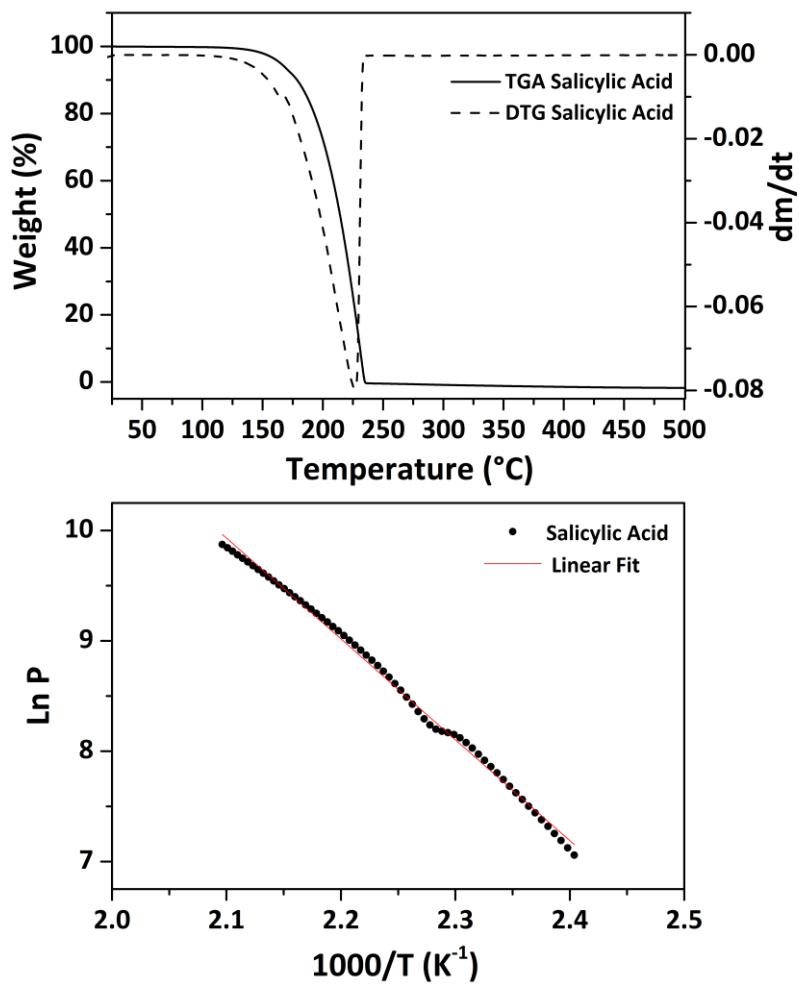
**Fig. S3.** FT-IR spectra of the Sr adduct with triglyme and tetraglyme.



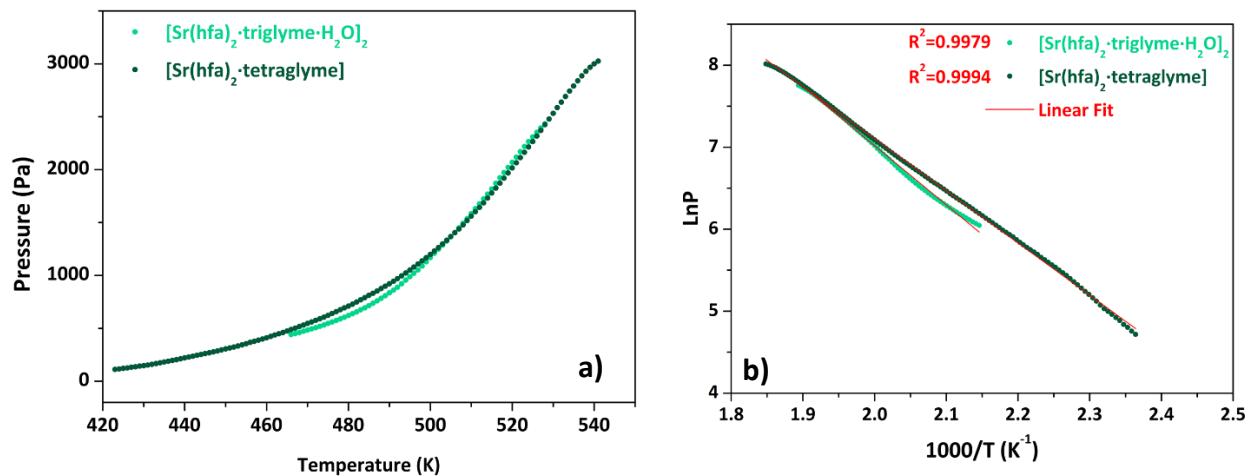
**Fig. S4.** Extrapolation of the  $k$  value from three distinct experiments on benzoic acid.



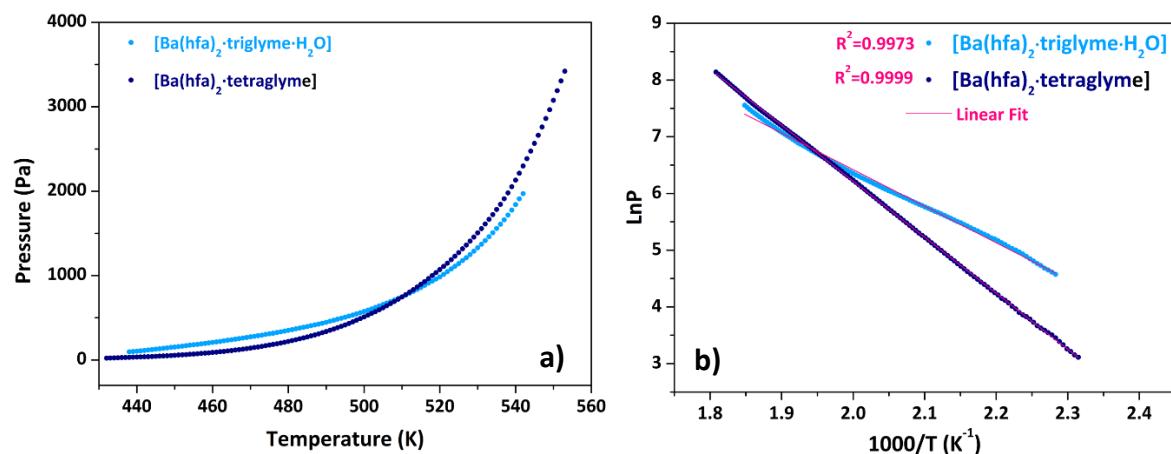
**Fig. S5.** Comparison of the vapor pressure of salicylic acid, determined in our experiments and the value derived from the Antoine' equation.



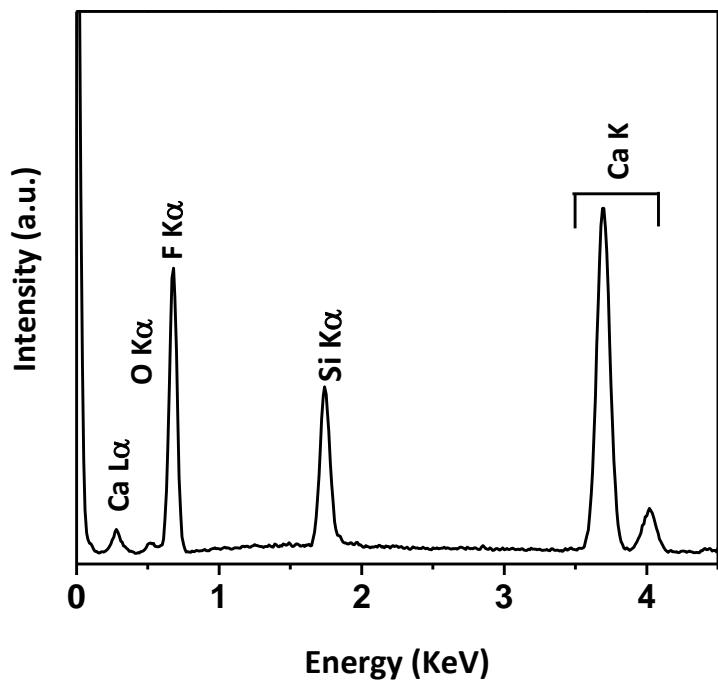
**Fig. S6.** TGA/DTG plot and Clausius-Clapeyron's plot of salicylic acid.



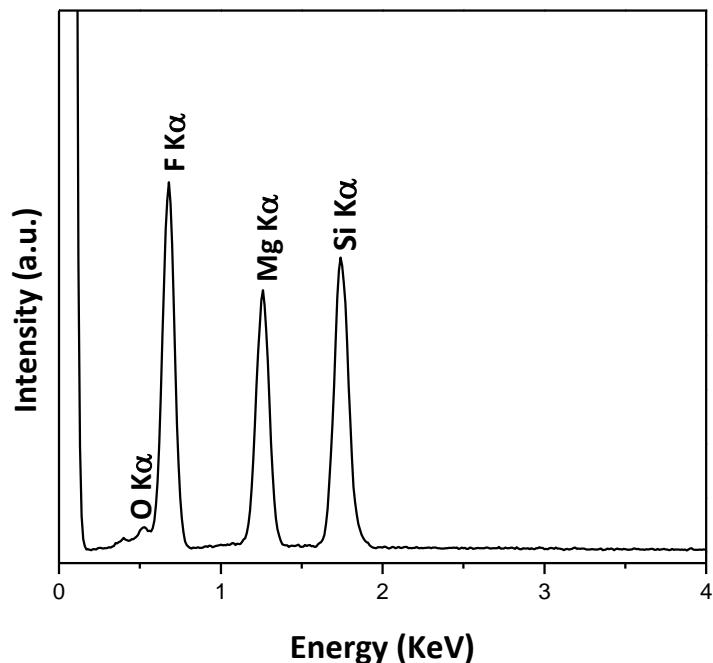
**Fig. S7.** Vapor pressure/temperature and  $\ln P$  vs  $1/T$  plots of “Sr(hfa)<sub>2</sub>·L” adducts (with L=triglyme, tetraglyme).



**Fig. S8.** Vapor pressure/temperature and  $\ln P$  vs  $1/T$  plots of “Ba(hfa)<sub>2</sub>·L” adducts (with L=triglyme, tetraglyme).



**Fig. S9.** EDX spectrum of the  $\text{CaF}_2$  film deposited on Si.



**Fig. S10.** EDX spectrum of the  $\text{MgF}_2$  film deposited on Si.