

Supplementary Material

Facile Preparation of BaCl_xF_y for the Catalytic Dehydrochlorination of 1-Chloro-1,1-Difluoroethane to Vinylidene Fluoride

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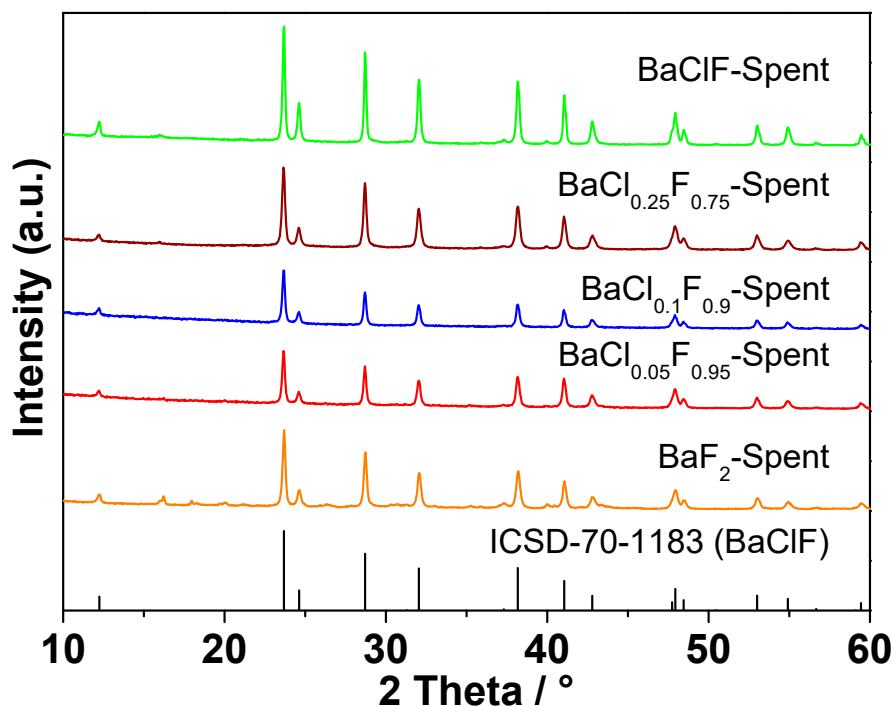


Figure S1. XRD patterns of spent BaF_2 and barium chlorofluoride catalysts.

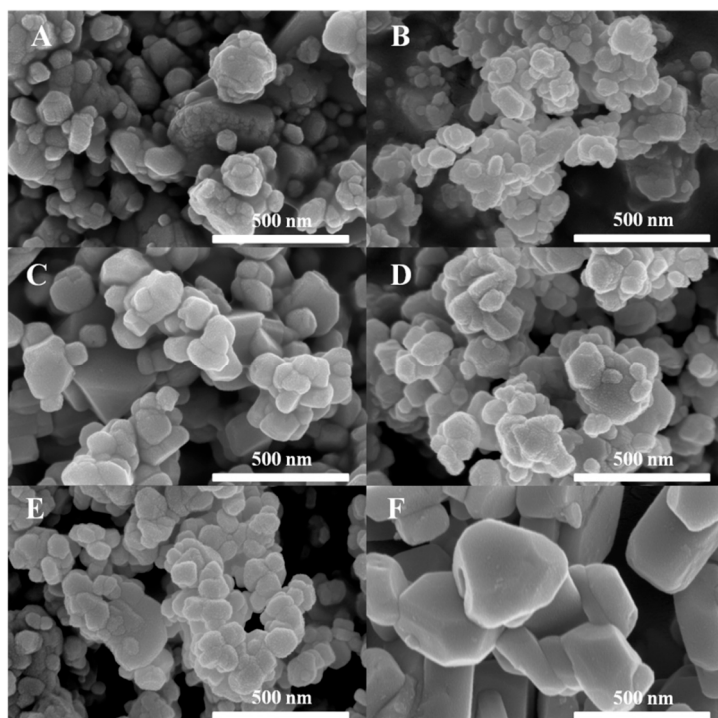


Figure S2. SEM images of (a) BaF_2 , (b) $\text{BaCl}_{0.025}\text{F}_{0.975}$, (c) $\text{BaCl}_{0.05}\text{F}_{0.95}$, (d) $\text{BaCl}_{0.1}\text{F}_{0.9}$, (e) $\text{BaCl}_{0.25}\text{F}_{0.75}$ and (f) BaClF following reaction with time on stream of 24 h.

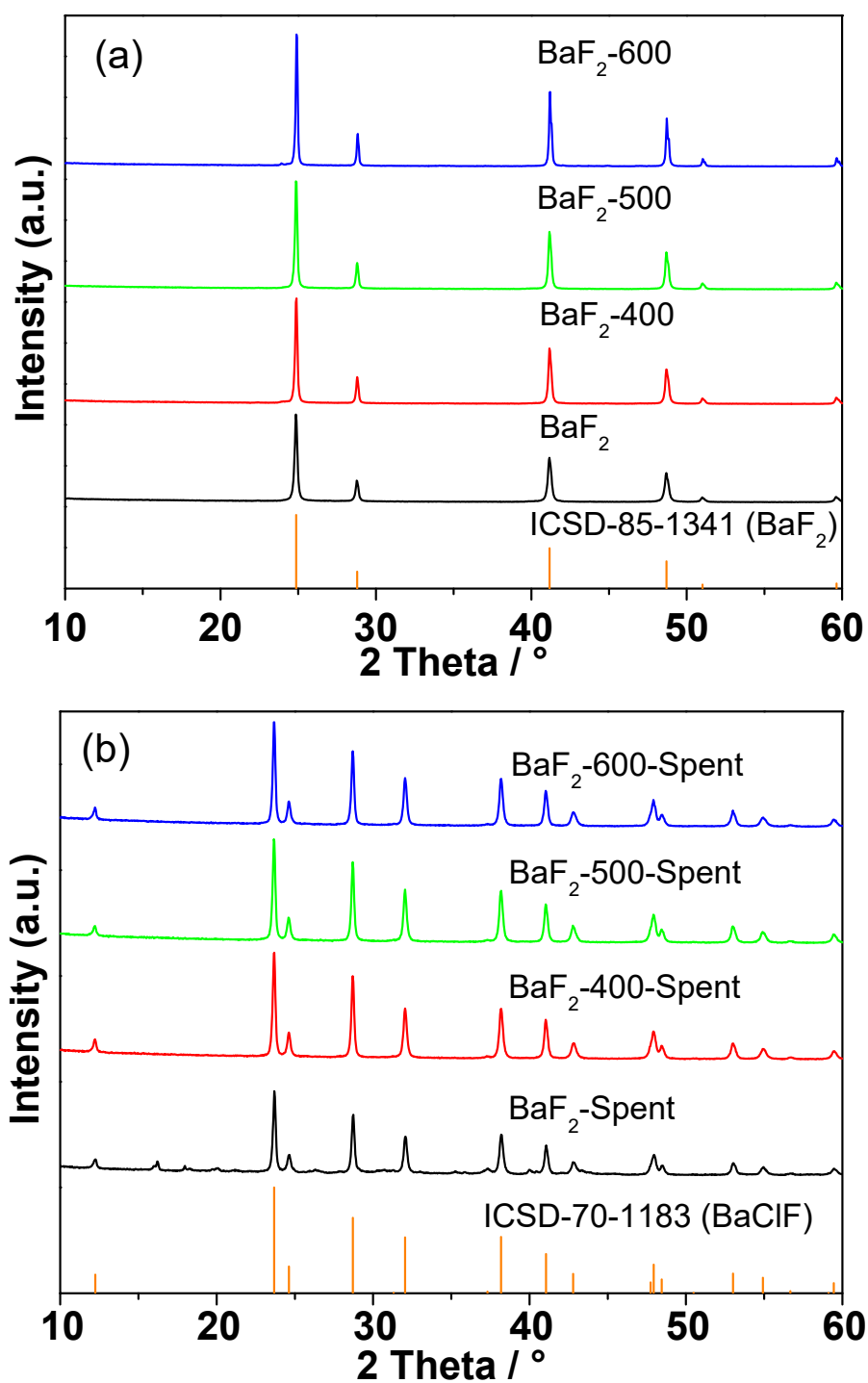


Figure S3. XRD patterns BaF₂ catalysts calcined at temperatures between 300 °C and 600 °C. (a) fresh and (b) spent BaF₂ catalysts.

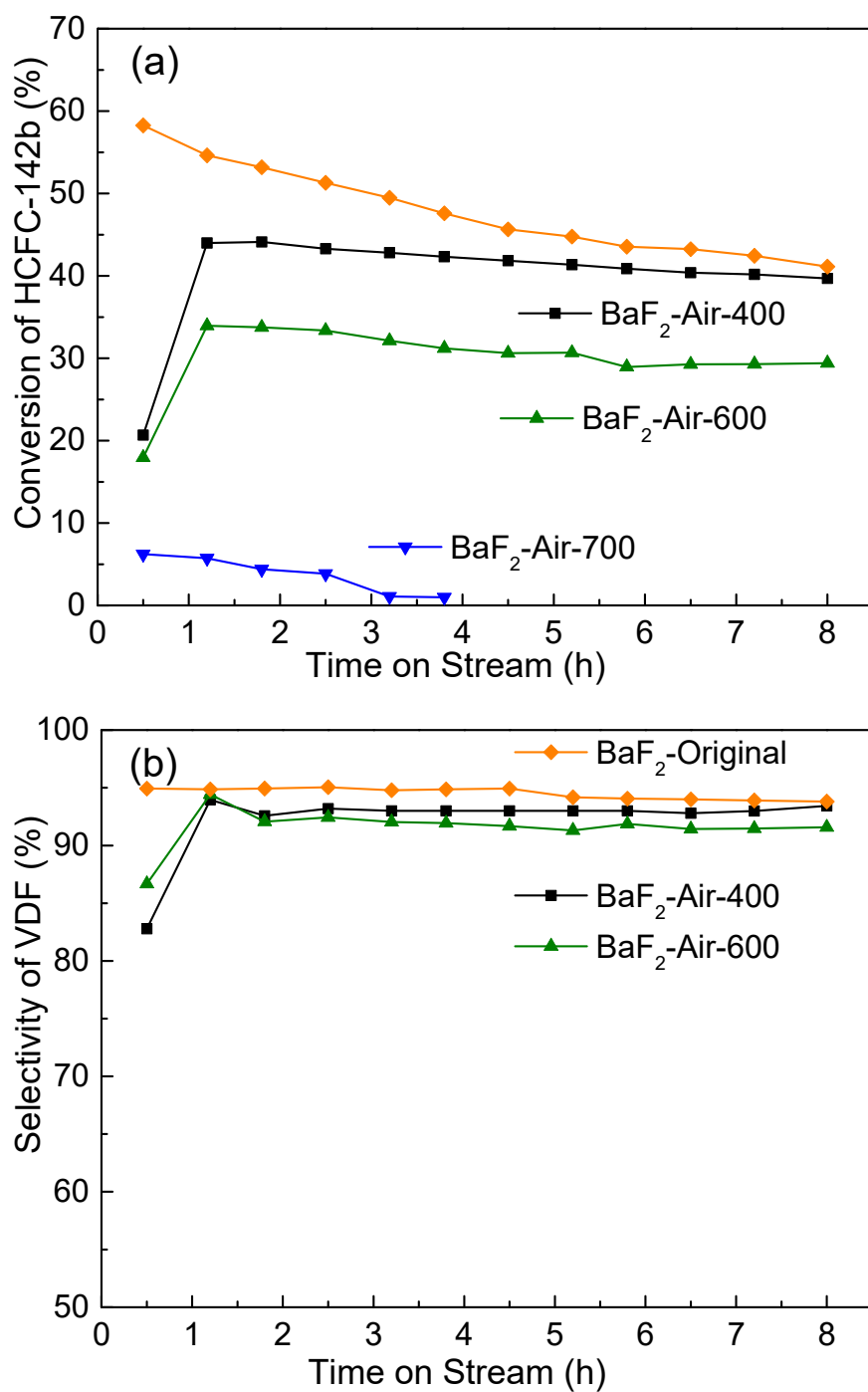


Figure S4. Effect of calcination on the conversion of (a) HCFC-142b and (b) selectivity to VDF for BaF₂ catalysts.

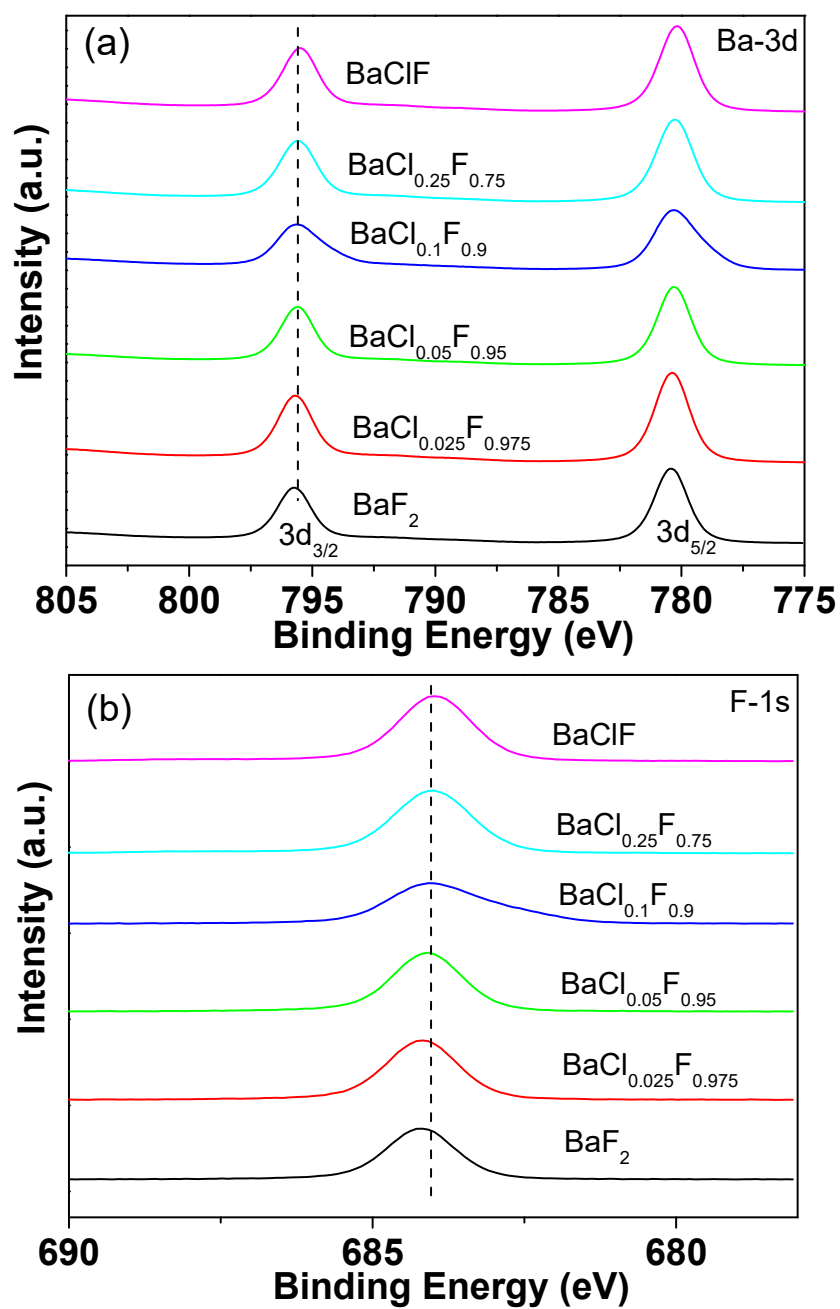


Figure S5. High resolution XPS of (a) Ba 3d and (b) F 1s spectra of BaF_2 and barium chlorofluoride catalysts following reaction with time on stream of 24 h.