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THE INDUSTRIAL HF PROCESS: A COMPUTER SIMULATION OF THE
FLUORSPAR/SULPHURIC ACID REACTION

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In spite of hydrogen fluoride being a commodity chemical, very little is known about the chemistry of its formation from fluorspar and sulphuric acid. The reaction is highly endothermic and is carried out industrially in large rotating kilns heated to ca. 285°C. Sampling is impossible. Using a bare minimum of facts, the author has pieced together a chemical explanation of what is going on in the process and will discuss the kinetics, the intermediates and the phases present.