

OXYGEN DIFLUORIDE

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The preparation and chemical and physical properties of the oxygen fluorides (OF_2 , OF , O_2F_2 , OOF and O_4F_2) are reviewed. There has been speculation about the existence of other oxygen fluorides (O_3F_2 , O_3F , OSF_2 and O_6F_2) but these have not been well-characterized. The first member, OF_2 , is much more stable than the other oxygen fluorides, and is also less-reactive. In addition to acting as a fluorinating agent and oxidizer, OF_2 has been shown to be a source of the OF radical. Dioxygen difluoride is a powerful fluorinating agent, but if reacted under carefully controlled conditions, can be a source of the OOF radical.