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""2. Samples and Analytical Methods""""""2.1. Representative Samples""; ""2.2. Analytical Methods""; ""2.3. Improved Online Vacuum Stepwise Heating Method""; ""3. Occurrence Modes of Volatiles""; ""3.1. Fluid Inclusions""; ""3.2. Volatiles in Mineral Structural Defects and Vacancies""; ""3.3. Anion Complexes Incorporated in Crystal Structures""; ""3.4. The Superimposed Effects of Volatiles in Different Occurrence""; ""4. The Redox State and Volatile Species in the Mantle""; ""4.1. The Redox State in the Mantle""; ""4.2. Volatile Species in the Mantle""
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