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Nota di contenuto	Research Background for Natural Product Maoecrystal V and Its Family -- The Model Study of Natural Product Maoecrystal V -- The total synthesis study of Maoecrystal V -- Summary.
Sommario/riassunto	In this thesis, the author describes the total synthesis of natural product Maoecrystal V in detail. In the first part of the thesis, the author introduces the research background and reviews the research progress in total synthesis of Maoecrystal V. In the second part, the author develops a novel and concise approach for the stereoselective construction of the tetracyclic model system of Maoecrystal V. The model system is accomplished in 8 steps with 20% yield. In the third part, the author describes the first successful total synthesis of Maoecrystal V and investigates four strategies for constructing the key tetrahydrofuran oxa-bridge skeleton. The total synthesis starts from a known compound and is accomplished in 17 steps with 1.2% yield. The successful total synthesis of Maoecrystal V will contribute to the development of efficient synthetic strategies for natural products and other compounds with complex structures.

