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TiO₂ SAMPLES"; "MORPHOLOGY AND MICROSTRUCTURE BY TEM AND HRTEM"; "STRUCTURE ANALYSIS"; "OPTICAL PROPERTIES OF RUTILE NANOSTRUCTURES"; "PHOTOCATALYTIC ACTIVITY OF PURE AND FE-DOPED RUTILE NANOPARTICLES"; "CONCLUSIONS"; "ACKNOWLEDGMENTS"; "REFERENCES"; "CHAPTER 4. THE FABRICATION OF RUTILE NANOPARTICLES AND HOLLOW MICROSPHERES WITH MESOPOROSITY"; "ABSTRACT"

"1. THE SYNTHESIS OF RUTILE NANOPARTICLE IN AQUEOUS SOLUTION"

"1.1. Introduction"; "1.2. Preparation of Rutile Nanoparticle"; "1.3. Characterization of Rutile Nanoparticles"; "1.4. Formation Mechanism of Rutile Nanocrystal"; "2. THE TRANSFORMATION PROCESS FROM ANATASE NANOPARTICLE TO NANORUTILE DURING CALCINATION"; "2.1. Introduction"; "2.2. Preparation of Nanoanatase"; "2.3. The Transformation Process from Anatase to Rutile"; "2.4. The Rate Competition Determines the Size Distribution and the Diameter of Anatase Nanoparticles during Calcinations"; "2.5. The Microstrain Determines the Rates of the Anatase Growth and the Transformation"

"3. THE FABRICATION OF RUTILE HOLLOW MICROSPHERES WITH MESOPOROSITY"; "3.1. Introduction"; "3.2. Sample Preparation"; "3.3. XRD"; "3.4. SEM"; "3.5. Specific Surface Area"; "3.6. UV Absorption"; "3.7. The Formation of the Hollow Structure"; "CONCLUSIONS"; "REFERENCES"; "CHAPTER 5. TITANIUM DIOXIDE UNDER AMBIENT AIR: PREPARATION AND PHOTOCATALYTIC PROPERTIES OF TiO₂ PRECIPITATED AEROSOLS"; "ABSTRACT"; "1. INTRODUCTION"; "2. EXPERIMENTAL"; "2.1. Tropospheric conditions"

"a). Gas phase composition of troposphere"
