

< 1997 >

【学術論文】

- 1) **Photocatalysis on Titanium Oxide Catalysts: Approaches in Achieving Highly Efficient Reactions and Realizing the Use of Visible Light**
Catal. Surv. Japan, **1**, 169-179 (1997).
- 2) **In Situ Investigation of the Photocatalytic Decomposition of NO_x on Ion-Exchanged Silver (I) ZSM-5 Catalysts**
Catal. Today, **35**, 177-181 (1997).
- 3) **Characterization of Zirconium-Silicon Binary Oxide Catalysts Prepared by the Sol-Gel Method and Their Photocatalytic Activity for the Isomerization of 2-Butene**
J. Phys. Chem., **101**, 369-373 (1997).
- 4) **The Design of Photocatalysts for the Removal of NO_x at Normal Temperatures-- Copper (I) and Silver (I) Ion Catalysts Anchored within Zeolite Cavities**
Res. Chem. Intermed., **23**, 197-217 (1997).
- 5) **Photocatalytic Reduction of CO₂ with H₂O on Titanium Oxides Anchored within Micropores of Zeolites: Effects of the Structure of the Active Sites and the Addition of Pt**
J. Phys. Chem. B, **101**, 2632-2636 (1997).
- 6) **Low-Temperature Decomposition of Methanol to Carbon Monoxide and Hydrogen with Low Activation Energy over Pd/ZrO₂ Catalyst**
Catal. Lett., 189-191 (1997).
- 7) **Photocatalytic Reduction of CO₂ with H₂O on Ti-MCM-41 and Ti-MCM-48 Mesoporous Zeolites at 328 K**
Chem. Lett., 659-660 (1997).
- 8) **Femtosecond Diffuse Reflectance Spectroscopy on Some Standard TiO₂ Powder Catalysts**
Chem. Lett., 735-736 (1997).
- 9) **Fluorescence Properties of BDD Molecules Doped in Si-Ti Binary Oxide Systems by the Sol-Gel Method**
Chem. Lett., 1027-1028 (1997).
- 10) **Photoluminescence Properties of the Vanadium Silicalite-1 Catalyst and Its Photocatalytic Reactivity for the Reduction of NO with Propane**
Chem. Lett., 1127-1128 (1997).
- 11) **The In-Situ Characterization of Titanium Oxides Prepared in the Zeolite Cavities and Framework and Their Photocatalytic Reactivities for the Direct Decomposition of NO into N₂ at 275 K**
Stud. Surf. Sci. Catal., **105**, 1609-1616 (1997).
- 12) **Relationship Between the Local Structures of Titanium Oxide Photocatalysts and Their Reactivities-XAFS, UV, Photoluminescence and Photoreaction Investigations**
J. Phys. IV FRANCE, **7**, 883-885 (1997).

13) XAFS Studies on the Metal Ion (Cu, Ag) Photocatalysts Prepared within Zeolite Cavities Using an Ion-Exchange Method

J. Phys. IV FRANCE, **7**, 941-942 (1997).

14) Copper Ion Catalysts Anchored onto Various Oxide Supports and Their Photocatalytic Reactivities for the Decomposition of N₂O at 298 K. -In Situ XAFS, Photoluminescence, EPR Investigations

J. Phys. IV FRANCE, **7**, 943-944 (1997).

15) Removal of diluted NO using activated carbon fibers

日本化学会誌, **2**, 147-152 (1997).

16) Preparation of Transparent TS-1 Zeolite Film and Its Photocatalytic Isomerization under UV Irradiation

Korean J. Chem. Eng., **14**, 213-215 (1997).

17) Photocatalytic Decomposition of NO at 275 K on Titanium Oxide Catalysts Anchored within Zeolite Cavities and Frameworks

Appl. Surf. Sci., **121-122**, 305-309 (1997).

18) Characteristic Features of Raman Band Shifts of Vanadium Oxide Catalysts Exchanged with ¹⁸O Tracer and Active Sites for Reoxidation

J. Mol. Catal. A: Chemical, **116**, 421-429 (1997).

19) Partial Oxidation of CH₄ over ZSM-5 Catalysts

Appl. Surf. Sci., **121-122**, 413-416 (1997).

【総説・解説】

1) ホトルミネッセンス分光法の触媒研究への応用

触媒, **39**, 45-49 (1997).

2) 光触媒による環境浄化

市政, **46**, 90-93 (1997).

3) NO_x 除去を目指した高活性な酸化チタンおよび可視光で作用する第2世代の酸化チタン光触媒の開発

ペテロテック, **20**, 66-72 (1997).

4) 可視光で機能する酸化チタン光触媒 -イオン注入法による新展開-

オプトロニクス, **6**, 161-165 (1997).

5) ゼオライトの細孔内や層状化合物の層間での光触媒反応と光化学過程の制御 (I-1)

ゼオライト情報, **5(8)**, 1-6 (1997).

6) ゼオライトの細孔内や層状化合物の層間での光触媒反応と光化学過程の制御 (I-2)

ゼオライト情報, **5(9)**, 1-8 (1997).

7) ゼオライトの細孔内や層状化合物の層間での光触媒反応と光化学過程の制御(II-1)

ゼオライト情報, **5(10)**, 1-7 (1997).

8) ゼオライトの細孔内や層状化合物の層間での光触媒反応と光化学過程の制御(II-2)
ゼオライト情報, 5(11), 1-10 (1997).

9) ゼオライトの細孔内や層状化合物の層間での光触媒反応と光化学過程の制御 (III)
ゼオライト情報, 5(12), 1-11 (1997).

10) イオンビームを利用する新しい光機能材料の創製
化学, 52, 74-75 (1997).

11) イオン注入法による高機能な光触媒の開発-可視光で機能する酸化チタン光触媒
アルバック・テクニカル・ジャーナル, 47, 15-19 (1997).

【著書】

1) **Handbook of Heterogeneous Catalysis "Photoluminescence Spectroscopy"**

(Ed. by G. Ertl, H. Knozinger and J. Weitkamp), VCH A Wiley Company, 664-671 (1997).

2) **Heterogeneous Photocatalysis, Wiley Series in Photoscience and Photoengineering 3**

(Ed. by M. Schiavello) "Photocatalytic Reactions-Photocatalytic Reduction of Carbon Dioxide with Water and the Hydrogenation of Unsaturated Hydrocarbons with Water" John Wiley & Sons (England), 133-168 (1997).

3) **Photoelectrochemistry "The Utilization of Visible Light by Titanium Dioxide Photocatalysts Modified by a Metal Ion Implantation Method"**

(Ed. by A. Fujishima), The Electrochemical Society, Inc., 331-334 (1997).

4) **Discussions on Zeolite and Microporous Materials "Photochemistry of Alkyl Ketones Included within the Zeolite Cavities: The Effect of Ion-exchanged Alkali Metal Cations and Types of Zeolites"**

(Ed. H. Chon), Hanrimwon Publishing Company, 78-78 (1997).

5) 光化学エネルギー変換 -基礎と応用- 「固相担持金属イオンの光触媒作用」

(金子正夫編著), アイピーシー, 37-55 (1997).

6) 触媒技術の動向と展望 (第I編) 「酸化チタン光触媒の基礎研究と応用製品化への展開状況」

(触媒学会編), 触媒学会, 24-36 (1997).

7) 酸化チタン光触媒の開発と環境・エネルギー分野への応用展開 "固定化・可視光化・薄膜化・活性制御・評価手法" 「光触媒の作成と評価技術」

(技術情報協会編), 技術情報協会, 53-66 (1997).

8) 酸化チタン光触媒の開発と環境・エネルギー分野への応用展開 "固定化・可視光化・薄膜化・活性制御・評価手法" 「光触媒の機能化・可視光化」

(技術情報協会編), 技術情報協会, 87-99 (1997).

9) 石炭実験・分析ハンドブック 「X線を利用した機器分析」

(エネルギー工学会編), 日本エネルギー学会, 32-39 (1997).

10) **Surface Photochemistry**

J. Wiley & Sons, Inc. (Ed. by M. Anpo) (1996).