

## < 2002 >

### 【学術論文】

#### 1) New Trends in Environmentally-Friendly Catalytic Science

*Catal. Today*, **74**, 191 (2002).

#### 2) Preparation of Ti/B Binary Oxide Thin Films by the Ionized Cluster Beam (ICB) Method: their Photocatalytic Reactivity and Photoinduced Superhydrophilic Properties

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#### 3) Design and Development of Titanium Oxide Photocatalysts Operating under Visible and UV Light Irradiation. The Application of Metal Ion-implantation Techniques to Semiconductor TiO<sub>2</sub> and Ti/zeolite Catalysts

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#### 4) Local Structure of Highly Dispersed Lead Containing Zeolite. An ab initio and Density Functional Theory Study

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#### 5) Thermal Instability of 5-(9-anthrylmethyl)-10-methyl-5,10-dihydrophenazine. A Quantum Chemical DFT Study

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#### 6) Characterization of Self-standing Ti-containing Porous Silica Thin Films and Their Reactivity for the Photocatalytic Reduction of CO<sub>2</sub> and H<sub>2</sub>O

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#### 7) Photocatalytic Reduction of CO<sub>2</sub> with H<sub>2</sub>O on Ti-containing Porous Silica Thin Film Photocatalysts

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#### 8) Photocatalytic Reduction of CO<sub>2</sub> with H<sub>2</sub>O on Titanium Oxides Prepared within Zeolite and Mesoporous Molecular Sieves

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#### 9) Plasma Catalytic Reaction of Natural Gas to C<sub>2</sub> Product over Pd-NiO/Al<sub>2</sub>O<sub>3</sub> and Pt-Sn/Al<sub>2</sub>O<sub>3</sub> Catalysts

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#### 10) FT-IR Study of Adsorption and Photodegradation of L-alanine on TiO<sub>2</sub> Powder

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#### 11) Preparation of Ti/B Binary Oxide Thin Films by the Ionized Cluster Beam (ICB) Method and Their Photocatalytic Reactivity and Photoinduced Superhydrophilic Properties

*Proc. 3rd Intern. Symp. on Eco-Mater. Process. & Design*, 26-29 (2002).

#### 12) In situ XAFS Studies on the Effects of the Hydrophobic-hydrophilic Properties of Ti-Beta Zeolites in the Photocatalytic Reduction of CO<sub>2</sub> with H<sub>2</sub>O

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**13) Photocatalytic Ethylene Polymerization on Chromium Containing Mesoporous Molecular Sieves**  
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**14) Photocatalytic Degradation of Propanol Diluted in Water under Visible Light Irradiation Using Metal Ion-Implanted Titanium Dioxide Photocatalysts**  
*Photochem. Photobiol. A. Chem.*, **148**, 257-261 (2002).

**15) Molecular Design of TiO<sub>2</sub>/Activated Carbon Fiber Systems by an Ionized Cluster Beam Method and Their Application for the Photocatalytic Water Purification**  
*Crystals and Liquid Crystals*, **388**, 39-44 (2002).

**16) 可視光照射下で機能する Cr 含有シリカメソ多孔体光触媒**  
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**17) A Novel Catalyst Containing a Platinum Complex in Polyethylen Glycol Medium Supported on Silica Gel for Vapor-phase Hydrosilylation of Acetylene with Trichlorosilane or Trimethoxysilane**  
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#### 【総説・解説】

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3) におい対策の切り札  
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4) グリーンケミストリーと酸化チタン光触媒  
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5) グリーンケミストリーと環境調和型光触媒  
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6) Ag<sup>+</sup>イオン担持ゼオライト触媒上での NO<sub>x</sub> の光触媒分解反応  
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7) 可視光でも機能する第2世代の酸化チタン光触媒 -イオン注入の応用- : Ti-含有ゼオライト系光触媒の可視光化とその発現機構  
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8) 四配位酸化チタン光触媒による空気浄化 : NO<sub>x</sub> 分解と人工光合成(CO<sub>2</sub> 固定)  
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## 【著書】

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- 3) CO<sub>2</sub> Conversion and Utilization (ACS Symposium Series 809) 「Photocatalytic Reduction of CO<sub>2</sub> with H<sub>2</sub>O on Various Titanium Oxide Catalysts」  
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- 4) プラズマ・イオンビーム応用とナノテクノロジー 「光触媒材料」  
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- 5) 光触媒 (酸化チタン) 商品の開発 「酸化チタン光触媒の機能と実用化を目指した研究開発」  
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- 6) 光触媒 (酸化チタン) 商品の開発 「光触媒担持多孔質体の開発と応用」  
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- 8) 可視光応答型光触媒開発の最前線 「紫外・可視光で機能する新規な第2世代のTiO<sub>2</sub>光触媒の開発」  
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