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Procházka, Jr. et al.

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(54) **TITANIUM DIOXIDE CATALYST STRUCTURE FOR PROCESSES UP TO 1000° C AND MANUFACTURING THEREOF**

(75) Inventors: **Jan Procházka, Jr.**, KamennéŽehrovice (CZ); **Jan Procházka, Sr.**, KamennéŽehrovice (CZ)

(73) Assignee: **Advanced Materials—JTJ S.R.O.**, KamenneéŽehrovice (CZ)

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USPC **502/208**; 502/350; 423/610; 977/773

(58) **Field of Classification Search** 423/610; 502/208, 350; 977/773, 775, 776
See application file for complete search history.

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Primary Examiner — Anthony J Zimmer
(74) *Attorney, Agent, or Firm* — Buchanan Ingersoll & Rooney PC

(57) **ABSTRACT**

The TiO_2 catalyst structure consisting of TiO_2 nano-particles in the anatase crystal form, doped with 0.05-5 wt % phosphorus on the TiO_2 basis, organized in the circular planar aggregates with the specific surface area ranging from 40 to 120 m^2/g, suitable for catalytic processes at the temperature up to 800° C., and the TiO_2 catalyst structure of with the morphology of the aggregated compact particles, with the specific surface area from 20 to 40 m^2/g, suitable for the catalytic processes at the temperature up to 1000° C. Active substances selected from the group consisting of silver, copper, gold, platinum metals, nickel, molybdenum and metal oxides except for alkaline metals oxides can be applied onto the surface of both types of the structure.

12 Claims, 5 Drawing Sheets

