



US009409149B2

(12) **United States Patent**
Koranne et al.

(10) **Patent No.:** **US 9,409,149 B2**
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **SULFUR RESISTANT CLADDED TITANIA—ALUMINA SUPPORTS**
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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1063 days.

(58) **Field of Classification Search**
CPC B01J 21/063; B01J 21/04; B01J 21/06; B01J 21/12; B01J 23/10; B01J 23/40; B01J 35/002; B01J 35/023; B01J 35/1019; B01J 37/0045; B01J 37/0221; B01J 37/0248; B01J 37/035; B01J 37/02; C01F 7/02; C01F 7/021; B01D 2255/90; B01D 2255/20707; C01P 2006/90; C01P 2006/12; C01P 2006/14; C01P 2006/16; C01P 2004/61; C01P 2004/84; C01P 2004/86; C01P 2004/88
See application file for complete search history.

(21) Appl. No.: **13/498,609**
(22) PCT Filed: **Oct. 1, 2010**
(86) PCT No.: **PCT/US2010/051072**
§ 371 (c)(1),
(2), (4) Date: **Mar. 28, 2012**
(87) PCT Pub. No.: **WO2011/043995**
PCT Pub. Date: **Apr. 14, 2011**

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(65) **Prior Publication Data**
US 2012/0190541 A1 Jul. 26, 2012

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Related U.S. Application Data
(60) Provisional application No. 61/249,824, filed on Oct. 8, 2009.

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(51) **Int. Cl.**
B01J 21/04 (2006.01)
B01J 21/06 (2006.01)
B01J 23/10 (2006.01)
B01J 23/40 (2006.01)
B01J 35/00 (2006.01)
B01J 35/02 (2006.01)
B01J 35/10 (2006.01)
B01J 37/00 (2006.01)
B01J 37/02 (2006.01)
B01J 37/03 (2006.01)
C01F 7/02 (2006.01)
B01D 53/94 (2006.01)

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(52) **U.S. Cl.**
CPC **B01J 21/063** (2013.01); **B01J 23/10** (2013.01); **B01J 23/40** (2013.01); **B01J 35/002** (2013.01); **B01J 35/023** (2013.01); **B01J 35/1019** (2013.01); **B01J 37/0045** (2013.01); **B01J 37/0221** (2013.01); **B01J 37/0248** (2013.01); **B01J 37/035** (2013.01); **C01F 7/02** (2013.01); **C01F 7/021** (2013.01); **B01D 53/949** (2013.01); **B01D 2255/20707** (2013.01); **B01D 2255/90** (2013.01); **C01P 2004/61** (2013.01); **C01P 2004/84** (2013.01); **C01P 2004/86** (2013.01); **C01P 2004/88** (2013.01); **C01P 2006/12** (2013.01); **C01P 2006/14** (2013.01); **C01P 2006/16** (2013.01); **C01P 2006/90** (2013.01)

(57) **ABSTRACT**
The present invention is directed to a method of forming titania clad high surface area alumina suitable as a support for forming noble metal catalysts. The resultant catalysts exhibit resistance to poisoning by sulfurous materials and, therefore, are useful in applications directed to internal combustion engine emission conversion and the like. The present invention provides a commercially feasible and cost effective method of forming a highly desired support for noble metal catalyst application. The process comprises forming a slurry of porous alumina particulate suitable as a catalyst support for the intended application, mixing said slurry with a solution of titanyl sulfate having a pH of about 1, increasing the pH of the mixed slurry/solution at a slow rate of from 0.05 to 0.5 pH unit per minute to a pH of ≤4 by the addition of a basic solution, allowing the resultant slurry to age for a period of from 10 to 120 minutes, separating the treated porous alumina particulates and washing same free of sulfate with a weak base, drying and calcining said particulates to produce titania clad alumina particulate product. The resultant material exhibits a normalized sulfur uptake of less than about 45 μg/m²-sample. Such material can subsequently be coated with a noble metal to form the catalyst material.

12 Claims, No Drawings