

Zebao Rui

List of Publications by Year in descending order

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81
papers

3,828
citations

94433

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133252

59
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83
all docs

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docs citations

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times ranked

4207
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Bifunctional catalytic material: An ultrastable and high-performance surface defect CeO ₂ nanosheets for formaldehyde thermal oxidation and photocatalytic oxidation. Applied Catalysis B: Environmental, 2016, 181, 779-787. | 20.2 | 268 |
| 2 | Monodentate hydroxide as a super strong yet reversible active site for CO ₂ capture from high-humidity flue gas. Energy and Environmental Science, 2015, 8, 1011-1016. | 30.8 | 233 |
| 3 | Putting an ultrahigh concentration of amine groups into a metal-organic framework for CO ₂ capture at low pressures. Chemical Science, 2016, 7, 6528-6533. | 7.4 | 197 |
| 4 | Efficient formaldehyde oxidation over nickel hydroxide promoted Pt/γ-Al ₂ O ₃ with a low Pt content. Applied Catalysis B: Environmental, 2017, 200, 543-551. | 20.2 | 159 |
| 5 | Performance of ionic-conducting ceramic/carbonate composite material as solid oxide fuel cell electrolyte and CO ₂ permeation membrane. Catalysis Today, 2009, 148, 303-309. | 4.4 | 122 |
| 6 | Enhanced methane combustion performance over NiAl ₂ O ₄ -interface-promoted Pd/γ-Al ₂ O ₃ . Journal of Catalysis, 2016, 338, 192-201. | 6.2 | 113 |
| 7 | Core-Shell NiO@PdO Nanoparticles Supported on Alumina as an Advanced Catalyst for Methane Oxidation. ACS Catalysis, 2017, 7, 1615-1625. | 11.2 | 113 |
| 8 | Modeling and analysis of carbon dioxide permeation through ceramic-carbonate dual-phase membranes. Journal of Membrane Science, 2009, 345, 110-118. | 8.2 | 101 |
| 9 | Comparison of TiO ₂ Degussa P25 with anatase and rutile crystalline phases for methane combustion. Chemical Engineering Journal, 2014, 243, 254-264. | 12.7 | 93 |
| 10 | Carbon Dots Sensitized BiOI with Dominant {001} Facets for Superior Photocatalytic Performance. Industrial & Engineering Chemistry Research, 2015, 54, 12788-12794. | 3.7 | 89 |
| 11 | Strong Metal-Support Interaction in Pt/TiO ₂ Induced by Mild HCHO and NaBH ₄ Solution Reduction and Its Effect on Catalytic Toluene Combustion. Industrial & Engineering Chemistry Research, 2014, 53, 15879-15888. | 3.7 | 86 |
| 12 | Perovskite-based photocatalysts for organic contaminants removal: Current status and future perspectives. Catalysis Today, 2019, 327, 47-63. | 4.4 | 86 |
| 13 | MnO ₂ Promoted TiO ₂ Nanotube Array Supported Pt Catalyst for Formaldehyde Oxidation with Enhanced Efficiency. Industrial & Engineering Chemistry Research, 2015, 54, 8900-8907. | 3.7 | 84 |
| 14 | Enhancing the Photocatalytic Performance of BiOCl _x by Introducing Surface Disorders and Bi Nanoparticles as Cocatalyst. Advanced Materials Interfaces, 2015, 2, 1500249. | 3.7 | 82 |
| 15 | High-Temperature Stability of Palladium Membranes on Porous Metal Supports with Different Intermediate Layers. Industrial & Engineering Chemistry Research, 2009, 48, 1880-1886. | 3.7 | 77 |
| 16 | Insight into the enhanced performance of TiO ₂ nanotube supported Pt catalyst for toluene oxidation. Catalysis Today, 2017, 297, 159-166. | 4.4 | 77 |
| 17 | Metal-organic framework membrane process for high purity CO ₂ production. AIChE Journal, 2016, 62, 3836-3841. | 3.6 | 68 |
| 18 | Monolith-Like TiO ₂ Nanotube Array Supported Pt Catalyst for HCHO Removal under Mild Conditions. Industrial & Engineering Chemistry Research, 2014, 53, 7629-7636. | 3.7 | 58 |

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|----|---|------|-----------|
| 19 | Selectively recombining the photoinduced charges in bandgap-broken Ag ₃ PO ₄ /GdCrO ₃ with a plasmonic Ag bridge for efficient photothermocatalytic VOCs degradation and CO ₂ reduction. <i>Applied Catalysis B: Environmental</i> , 2021, 291, 120053. | 20.2 | 57 |
| 20 | ZnO modified TiO ₂ nanotube array supported Pt catalyst for HCHO removal under mild conditions. <i>Catalysis Today</i> , 2016, 264, 23-30. | 4.4 | 56 |
| 21 | Oxygen vacancy defects modulated electrocatalytic activity of iron-nickel layered double hydroxide on Ni foam as highly active electrodes for oxygen evolution reaction. <i>Electrochimica Acta</i> , 2020, 331, 135395. | 5.2 | 56 |
| 22 | In situ DRIFTS study on the catalytic oxidation of toluene over V ₂ O ₅ /TiO ₂ under mild conditions. <i>Catalysis Communications</i> , 2011, 14, 77-81. | 3.3 | 55 |
| 23 | Synergistic Performance between Visible-Light Photocatalysis and Thermocatalysis for VOCs Oxidation over Robust Ag/F-Codoped SrTiO ₃ . <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 12766-12773. | 3.7 | 55 |
| 24 | Carbon Nitride Polymer Sensitization and Nitrogen Doping of SrTiO ₃ /TiO ₂ Nanotube Heterostructure toward High Visible Light Photocatalytic Performance. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 9999-10008. | 3.7 | 53 |
| 25 | Multifunctional Pt/ZSM-5 catalyst for complete oxidation of gaseous formaldehyde at ambient temperature. <i>Catalysis Today</i> , 2015, 258, 56-63. | 4.4 | 52 |
| 26 | Metal-Organic Framework-Derived IrO ₂ /CuO Catalyst for Selective Oxidation of Methane to Methanol. <i>ACS Energy Letters</i> , 2019, 4, 2945-2951. | 17.4 | 50 |
| 27 | Homeostasis in Cu _x O/SrTiO ₃ hybrid allows highly active and stable visible light photocatalytic performance. <i>Chemical Communications</i> , 2017, 53, 12329-12332. | 4.1 | 48 |
| 28 | DFT study of formaldehyde oxidation on silver cluster by active oxygen and hydroxyl groups: Mechanism comparison and synergistic effect. <i>Catalysis Today</i> , 2020, 347, 124-133. | 4.4 | 47 |
| 29 | Modeling and analysis of ceramic-carbonate dual-phase membrane reactor for carbon dioxide reforming with methane. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 8292-8300. | 7.1 | 45 |
| 30 | Hydrogen production with carbon dioxide capture by dual-phase ceramic-carbonate membrane reactor via steam reforming of methane. <i>Journal of Membrane Science</i> , 2020, 598, 117780. | 8.2 | 44 |
| 31 | Photothermocatalytic synergistic oxidation: An effective way to overcome the negative water effect on supported noble metal catalysts for VOCs oxidation. <i>Chemical Engineering Journal</i> , 2020, 397, 125485. | 12.7 | 44 |
| 32 | Analysis of oxygen permeation through dense ceramic membranes with chemical reactions of finite rate. <i>Chemical Engineering Science</i> , 2009, 64, 172-179. | 3.8 | 41 |
| 33 | Visible-light decomposition of gaseous toluene over BiFeO ₃ (Bi/Fe) ₂ O ₃ heterojunctions with enhanced performance. <i>Chemical Engineering Journal</i> , 2016, 302, 552-559. | 12.7 | 41 |
| 34 | Z-scheme Ag ₃ PO ₄ /Ag/SrTiO ₃ Heterojunction for Visible-Light Induced Photothermal Synergistic VOCs Degradation with Enhanced Performance. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 13950-13959. | 3.7 | 41 |
| 35 | Sequential growth reveals multi-spinel interface promotion for methane combustion over alumina supported palladium catalyst. <i>Applied Catalysis B: Environmental</i> , 2020, 273, 119071. | 20.2 | 41 |
| 36 | SrCo _{0.8} Fe _{0.2} O ₃ sorbent for high-temperature production of oxygen-enriched carbon dioxide stream. <i>Fuel</i> , 2010, 89, 1429-1434. | 6.4 | 38 |

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|----|--|------|-----------|
| 37 | Titania-supported Pt catalyst reduced with HCHO for HCHO oxidation under mild conditions. Chinese Journal of Catalysis, 2015, 36, 188-196. | 14.0 | 38 |
| 38 | Synergetic effect of oxygen vacancy and Pd site on the interaction between Pd/Anatase TiO ₂ (101) and formaldehyde: A density functional theory study. Catalysis Today, 2017, 297, 151-158. | 4.4 | 38 |
| 39 | Enhanced formaldehyde oxidation performance over Pt/ZSM-5 through a facile nickel cation modification. Applied Surface Science, 2018, 457, 670-675. | 6.1 | 37 |
| 40 | Promotion effect of strong metal-support interaction to thermocatalytic, photocatalytic, and photothermocatalytic oxidation of toluene on Pt/SrTiO ₃ . Chemosphere, 2020, 249, 126096. | 8.2 | 37 |
| 41 | Enhanced Photocatalytic Mineralization of Gaseous Toluene over SrTiO ₃ by Surface Hydroxylation. Industrial & Engineering Chemistry Research, 2016, 55, 11923-11930. | 3.7 | 33 |
| 42 | Effect of metal-support interface on hydrogen permeation through palladium membranes. AIChE Journal, 2009, 55, 630-639. | 3.6 | 30 |
| 43 | Sequential simulation of dense oxygen permeation membrane reactor for hydrogen production from oxidative steam reforming of ethanol with ASPEN PLUS. International Journal of Hydrogen Energy, 2010, 35, 6691-6698. | 7.1 | 29 |
| 44 | Enhanced Formaldehyde Removal from Air Using Fully Biodegradable Chitosan Grafted β -Cyclodextrin Adsorbent with Weak Chemical Interaction. Polymers, 2019, 11, 276. | 4.5 | 28 |
| 45 | Strong metal-support interaction assisted redispersion strategy for obtaining ultrafine and stable IrO ₂ /Ir active sites with exceptional methane oxidation activity. Applied Catalysis B: Environmental, 2021, 297, 120410. | 20.2 | 28 |
| 46 | Effect of titania polymorph on the properties of CuO/TiO ₂ catalysts for trace methane combustion. Journal of Molecular Catalysis A, 2013, 372, 128-136. | 4.8 | 27 |
| 47 | Synchronous pore structure and surface hydroxyl groups amelioration as an efficient route for promoting HCHO oxidation over Pt/ZSM-5. Catalysis Today, 2018, 316, 107-113. | 4.4 | 26 |
| 48 | Highly dispersed and active Pd nanoparticles over titania support through engineering oxygen vacancies and their anchoring effect. AIChE Journal, 2020, 66, e16288. | 3.6 | 25 |
| 49 | Anodic Alumina Supported Pt Catalyst for Total Oxidation of Trace Toluene. Chinese Journal of Chemical Engineering, 2014, 22, 882-887. | 3.5 | 24 |
| 50 | Defect-band bridge photothermally activates Type III heterojunction for CO ₂ reduction and typical VOCs oxidation. Applied Catalysis B: Environmental, 2022, 309, 121248. | 20.2 | 24 |
| 51 | Preparation of Thin Palladium Composite Membranes and Application to Hydrogen/Nitrogen Separation. Chinese Journal of Chemical Engineering, 2007, 15, 643-647. | 3.5 | 22 |
| 52 | Monolithic-like TiO ₂ nanotube supported Ru catalyst for activation of CH ₄ and CO ₂ to syngas. Catalysis Communications, 2011, 12, 1269-1273. | 3.3 | 21 |
| 53 | YBaCo ₄ O _{7+δ} sorbent for oxygen-enriched carbon dioxide stream production at a low-temperature. Fuel, 2012, 94, 191-196. | 6.4 | 21 |
| 54 | Simulation of methane conversion to syngas in a membrane reactor. Part II Model predictions. International Journal of Hydrogen Energy, 2008, 33, 2501-2506. | 7.1 | 20 |

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|----|---|------|-----------|
| 55 | Multichannel charge separation promoted ZnO/P25 heterojunctions for the photocatalytic oxidation of toluene. Chinese Journal of Catalysis, 2016, 37, 869-877. | 14.0 | 20 |
| 56 | Identification of the Nearby Hydroxyls TM Role in Promoting HCHO Oxidation over a Pt Catalyst. Industrial & Engineering Chemistry Research, 2018, 57, 8183-8189. | 3.7 | 20 |
| 57 | Plasmonic Metal Bridge Leading Type III Heterojunctions to Robust Type B Photothermocatalysts. Industrial & Engineering Chemistry Research, 2021, 60, 8420-8429. | 3.7 | 20 |
| 58 | Photothermocatalytic water splitting over Pt/ZnIn ₂ S ₄ for hydrogen production without external heat. Catalysis Today, 2022, 402, 210-219. | 4.4 | 19 |
| 59 | Anodic TiO ₂ nanotube array supported nickel “ noble metal bimetallic catalysts for activation of CH ₄ and CO ₂ to syngas. International Journal of Hydrogen Energy, 2014, 39, 16252-16261. | 7.1 | 18 |
| 60 | Pt supported on long-rod ¹² -FeOOH as an efficient catalyst for HCHO oxidation at ambient temperature. Catalysis Science and Technology, 2019, 9, 3287-3294. | 4.1 | 18 |
| 61 | Strategy for stabilizing noble metal nanoparticles without sacrificing active sites. Chemical Communications, 2019, 55, 6846-6849. | 4.1 | 18 |
| 62 | Combination of reduction-deposition Pd loading and zeolite dealumination as an effective route for promoting methane combustion over Pd/Beta. Catalysis Today, 2021, 376, 119-125. | 4.4 | 18 |
| 63 | Effect of sequential desilication and dealumination on catalytic performance of ZSM-5 catalyst for pyridine and 3-picoline synthesis. Journal of Materials Research, 2010, 25, 272-282. | 2.6 | 17 |
| 64 | Autothermal reforming of ethanol in dense oxygen permeation membrane reactor. Catalysis Today, 2016, 264, 214-220. | 4.4 | 16 |
| 65 | Facile synthesis of ZnO/SnO ₂ hetero nanotubes with enhanced electrocatalytic property. Catalysis Today, 2015, 258, 75-82. | 4.4 | 15 |
| 66 | Boosting Interfacial Interaction in Hierarchical Core-Shell Nanostructure for Highly Effective Visible Photocatalytic Performance. Journal of Physical Chemistry C, 2018, 122, 6137-6143. | 3.1 | 15 |
| 67 | Uniphase ruthenium-iridium alloy-based electronic regulation for electronic structure-function study in methane oxidation to methanol. Journal of Materials Chemistry A, 2020, 8, 24024-24030. | 10.3 | 15 |
| 68 | Highly CO ₂ perm-selective metal-organic framework membranes through CO ₂ annealing post-treatment. Journal of Membrane Science, 2018, 555, 97-104. | 8.2 | 14 |
| 69 | MOF-templated core-shell Co(II/III)@ZnO hexagonal prisms for selective oxidation of vanillyl alcohol. Catalysis Today, 2020, 355, 280-285. | 4.4 | 14 |
| 70 | Simulation of VOCs oxidation in a catalytic nanolith. RSC Advances, 2013, 3, 1103-1111. | 3.6 | 13 |
| 71 | Lewis acid (Ni ²⁺ , Co ^{2+/3+} or Zn ²⁺) modified electron-deficient Ir ⁴⁺ in IrO ₂ /CuO for promoting methane oxidation to ethanol and methanol. Journal of Materials Chemistry A, 2021, 9, 7094-7101. | 10.3 | 13 |
| 72 | Evaluation of TiO ₂ nanotube supported Ru catalyst for syngas production. Catalysis Today, 2013, 216, 178-184. | 4.4 | 11 |

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|----|---|------|-----------|
| 73 | Anodic aluminum oxide supported Pd@CeO ₂ catalyst for organic gas pollutants removal with an enhanced performance. <i>Catalysis Today</i> , 2020, 355, 602-607. | 4.4 | 11 |
| 74 | Deactivation Mechanism, Countermeasures, and Enhanced CH ₄ Oxidation Performance of Nickel/Cobalt Oxides. <i>Energy Technology</i> , 2020, 8, 1900641. | 3.8 | 9 |
| 75 | Thermodynamic Analysis of Hydrogen Generation from Methanolâ€“Formic Acidâ€“Steam Autothermal System. <i>Energy & Fuels</i> , 2013, 27, 5449-5458. | 5.1 | 8 |
| 76 | Multifunctional Z-scheme Cu _x O/Ag/SrTiO ₃ heterojunction for photothermocatalytic VOCs degradation and antibiosis. <i>Applied Surface Science</i> , 2023, 618, 153275. | 6.1 | 7 |
| 77 | Reactivation and Reuse of Platinumâ€“Based Spent Catalysts for Combustion of Exhaust Organic Gases. <i>Chemical Engineering and Technology</i> , 2015, 38, 409-415. | 1.5 | 6 |
| 78 | Efficient oxidation of cinnamon oil to natural benzaldehyde over Î²-cyclodextrin-functionalized MWCNTs. <i>Chinese Journal of Catalysis</i> , 2016, 37, 2086-2097. | 14.0 | 6 |
| 79 | In situ mercaptosilane-assisted confinement of Pd nanoparticles in Beta for high-efficient methane oxidation. <i>Catalysis Today</i> , 2022, 400-401, 124-131. | 4.4 | 4 |
| 80 | Preface to the special issue of â€œThe 18th Chinese National Congress on Catalysis-Energy Session (18NCC_Energy), October 16-20th 2017, Tianjin, Chinaâ€œ. <i>Catalysis Today</i> , 2019, 330, 1. | 4.4 | 2 |
| 81 | Catalysis promoting the development of chemical industry: A special issue dedicated to Tianjin University's 120th anniversary. <i>Catalysis Today</i> , 2016, 264, 1-2. | 4.4 | 0 |