



UvA-DARE (Digital Academic Repository)

Solid 'oxygen reservoirs' for selective hydrogen oxidation

Beckers, J.

Publication date
2009

[Link to publication](#)

Citation for published version (APA):

Beckers, J. (2009). *Solid 'oxygen reservoirs' for selective hydrogen oxidation*. [Thesis, fully internal, Universiteit van Amsterdam].

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

List of publications

[21] 'Lead-containing solid oxygen reservoirs for selective hydrogen combustion', Jurriaan Beckers and Gadi Rothenberg, *Green Chem.* **2009**, DOI: 10.1039/b913994j *

[20] ' $Ce_{0.95}Cr_{0.05}O_2$ and $Ce_{0.97}Cu_{0.03}O_2$: Active, selective and stable catalysts for selective hydrogen combustion', Jurriaan Beckers and Gadi Rothenberg, *Dalton Trans.* **2009**, 5673. *

[19] 'Bismuth-doped ceria, $Ce_{0.90}Bi_{0.10}O_2$: A selective and stable catalyst for clean hydrogen combustion', Jurriaan Beckers, Adam F. Lee and Gadi Rothenberg, *Adv. Synth. Catal.* **2009**, 351, 1557.*

[18] 'Marrying gas power and hydrogen energy: A catalytic system for combining methane conversion and hydrogen generation', Jurriaan Beckers, Cyril Gaudillère, David Farrusseng and Gadi Rothenberg, *Green Chem.*, **2009**, 11, 921.*

[17] 'Selective hydrogen oxidation catalysts via Genetic Algorithms', Jurriaan Beckers, Frédéric Clerc, Jan Hendrik Blank and Gadi Rothenberg, *Adv. Synth. Catal.* **2008**, 350, 2237.*

[16] 'Redox properties of doped and supported copper-ceria catalysts', Jurriaan Beckers and Gadi Rothenberg, *Dalton Trans.* **2008**, 6573.*

[15] 'Selective hydrogen oxidation in presence of C_3 hydrocarbons using perovskite oxygen reservoirs', Jurriaan Beckers, Ruben Drost, Ilona van Zandvoort, Paul F. Collignon and Gadi Rothenberg, *ChemPhysChem* **2008**, 9, 1062.*

* These articles originated from the PhD-project (2005–2009).

[14] 'Redox kinetics of ceria-based mixed oxides in selective hydrogen combustion', Jan Hendrik Blank, Jurriaan Beckers, Paul F. Collignon and Gadi Rothenberg, *ChemPhysChem* **2007**, 8, 2490.*

[13] 'A "green route" to propene through selective hydrogen oxidation', Jan Hendrik Blank, Jurriaan Beckers, Paul F. Collignon, Frédéric Clerc and Gadi Rothenberg, *Chem. Eur. J.* **2007**, 13, 5121.*

[12] 'Clean diesel power via microwave susceptible oxidation catalysts', Jurriaan Beckers, Lars M. van der Zande and Gadi Rothenberg, *ChemPhysChem*, **2006**, 7, 747.

[11] "'Hot spot' hydrocarbon oxidation catalysed by doped perovskites – towards cleaner diesel power', Jurriaan Beckers and Gadi Rothenberg, *ChemPhysChem*, **2005**, 6, 223.

[10] 'Nanocluster-based cross-coupling catalysts: A high-throughput approach', Mehul B. Thathagar, Jurriaan Beckers and Gadi Rothenberg, *Catal. Org. React.*, **2005**, 104, 211.

[9] 'Design and parallel synthesis of new oxidative dehydrogenation catalysts', Gadi Rothenberg, Bart E.A. de Graaf, Jurriaan Beckers and Alfred Blik, *Catal. Org. React.*, **2005**, 104, 201.

[8] 'The effect of the reduction temperature on the structure of Cu/ZnO/SiO₂ catalysts for methanol synthesis', Erdni D. Batyrev, Johannes C. van der Heuvel, Jurriaan Beckers, Wim P.A. Jansen and Hessel L. Casticum, *J. Catal.*, **2005**, 229, 136.

* These articles originated from the PhD-project (2005–2009).

- [7] 'Palladium-free and ligand-free Sonogashira cross-coupling', Mehul B. Thathagar, Jurriaan Beckers and Gadi Rothenberg, *Green Chem.*, **2004**, 6, 215.
- [6] 'Dielectric heating effects on the activity and SO_2 resistance of $La_{0.8}Ce_{0.2}MnO_3$ perovskite for methane oxidation', Ye Zhang-Steenwinkel, Hessel L. Castricum, Jurriaan Beckers, Erica Eiser and Alfred Blik, *J. Catal.* **2004**, 221, 523.
- [5] 'Using $La_{1-x}Ce_xMnO_3$ Perovskites as the active components for soot filter regeneration by dielectric fields', Ye Zhang-Steenwinkel, Jurriaan Beckers, Hessel L. Castricum and Alfred Blik, *Proceedings of the Third World Congress on Microwave and Radio Frequency Applications*, **2003**, Sydney, Australia.
- [4] 'Combinatorial design of copper-based mixed nanoclusters: new catalysts for Suzuki cross-coupling', Mehul B. Thathagar, Jurriaan Beckers and Gadi Rothenberg, *Adv. Synth. Catal.* **2003**, 345, 979.
- [3] 'Copper-catalyzed Suzuki cross-coupling using mixed nanocluster catalysts', Mehul B. Thathagar, Jurriaan Beckers and Gadi Rothenberg, *J. Am. Chem. Soc.* **2002**, 124, 11858.
- [2] 'Dynamic behavior of the surface structure of Cu/ZnO/SiO₂ catalysis', Wim P.A. Jansen, Jurriaan Beckers, Johannes C. van der Heuvel, Denier A.W. van der Gon, Alfred Blik and Hidde H. Brongersma, *J. Catal.* **2002**, 210, 229.
- [1] 'Surface Properties and Catalytic Performance in CO oxidation of cerium substituted Lanthanum-Manganese oxides', Ye Zhang-Steenwinkel, Jurriaan Beckers and Alfred Blik, *Appl. Catal. A: Gen.* **2002**, 235, 79.