



TAYLOR & FRANCIS

โดย จิรวัดน์ พรหมพร

jirawat@book.co.th

แผนกฝึกอบรมฐานข้อมูล

บริษัท บুক โปรโมชัน แอนด์ เซอร์วิส จำกัด

ปรับปรุงล่าสุด 11/05/50



CONTENT

ฐานข้อมูลวารสารอิเล็กทรอนิกส์จากสำนักพิมพ์ Taylor & Francis และสำนักพิมพ์ร่วมในเครือ อาทิเช่น Routledge และ Psychology Press และ Informa Healthcare เป็นต้น ประกอบด้วยวารสารมากกว่า 900 รายชื่อ ครอบคลุมสาขาวิชาทางด้าน Agricultural and Biological Science, Arts & Humanities, Business, Management and Economic, Chemistry, Computer Science, Education, Physics, Psychology and Geography, Planning and Environment, Social Science เป็นต้น ให้ข้อมูลรายการทางบรรณานุกรม สารสังเขป และเอกสารฉบับเต็ม



SEARCH METHOD

- Browse
- Basic Search
- Advanced Search

HOMEPAGE

informaworld™

HOME . ABOUT US . CONTACT US

HELP . PUBLISH WITH US . LIBRARIANS

eBooks

Journals

Reference Works

Abstract Databases

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search

in

entire site

GO ?

or Explore

informaworld

GO ?

► Browse **Publications** A-Z

► Browse **Subjects** A-Z

► **Advanced Search**

► **Sopida** | My Account | Sign In | Sign Out | Got a Voucher?



informaworld

Explore a world of specialist information for the academic professional and business communities.

informaworld™ is a one-stop site hosting journals, eBooks, abstract databases and reference works published by Taylor & Francis, Routledge, Psychology Press and Informa Healthcare.

We aim to help researchers reach relevant resources as quickly as possible, leaving more time for the important part - your research. We listen to librarians and have built **informaworld™** to meet your needs. Welcome to our world...**informaworld™**



Got a Voucher? - link through to claim access using a voucher.



Taylor & Francis
Taylor & Francis Group

Taylor & Francis,

founded in the City of London in 1798, is the oldest commercial journals publisher in the world, and one of the leading global academic publishers. We publish over 900 peer-reviewed research journals and around 1,800 new books each year: our backlist is in excess of



For Authors & Societies

► [Publish With Us](#)



For Readers

► [Set Up Alerts](#)



For Librarians

► [Your Subscriptions](#)

BROWSE

informaworld™

HOME . ABOUT US . CONTACT US

eBooks

Journals

Reference Works

Abstract Databases

HELP . PUBLISH WITH US . LIBRARIANS

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in

or Explore

- ▶ Browse **Publications** A-Z
- ▶ Browse **Subjects** A-Z
- ▶ **Advanced Search**

▶ CHIANG MAI UNIVERSITY

▶ SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?



Journals

HOME | SEARCH | **BROWSE**

Welcome to the Journals pages of **informaworld™**, where the specialist products and services from **Taylor & Francis**, **Routledge**, **Psychology Press** and **Informa Healthcare** come together in one dedicated resource.

informaworld™ combines improved accessibility with your own customisable features so that the information you need is readily available when you need it most.



To find out more about the journal publishers of the resources on **informaworld™** please click on the links below

- ▶ [Taylor & Francis](#)
- ▶ [Routledge](#)

- ▶ [Psychology Press](#)
- ▶ [Informa Healthcare](#)



Publish your article with us

Looking for information about how to get your article published? For more information including advice on writing and submitting articles, new journal proposals and the benefits

of publishing with us, please visit our author pages

- ▶ [Authors' Area](#)

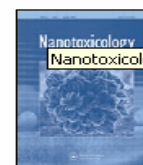


SPECIAL ISSUE

Quality in Higher Education

▶ **Special Issue Quality Assurance in Higher Education**

- ▶ [Read the Introduction](#)
- ▶ [Further Information](#)



CONFERENCE

Nanotoxicology 2007 Progress and Future Perspectives

19 - 21st April 2007
Venice, Italy

- ▶ [Further details](#)



For Librarians

Our specialist pages for Librarians and Information Professionals will help you manage your collections and stay up to date with all our new developments.

- ▶ [Librarians' Area](#)

Online Services

informaworld™ offers a range of great online tools to keep you up to date.

- ▶ [eUpdates](#)
- ▶ [Alerting Services](#)



SPECIAL ISSUE

Citizenship Studies

▶ **Special Issue Celebrating Ten Years of Citizenship Studies**

- ▶ [Further Details](#)

คลิกที่ **Browse**

BROWSE BY TITLES

informaworld™

HOME . ABOUT US . CONTACT US

eBooks Journals Reference Works Abstract Databases

HELP . PUBLISH WITH US . LIBRARIANS

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in GO ?
or Explore GO ?

► Browse **Publications** A-Z
► Browse **Subjects** A-Z
► **Advanced Search**

► CHIANG MAI UNIVERSITY ► SIGN IN Register | Why Register? | Sign Out | Got a Voucher?

Journals

HOME | SEARCH | BROWSE

Titles Subjects Authors

A • B • C • D • E • F • G • H • **1** • I • L • M • N • O • P • Q • R • S • T • U • Y

Ac - Ae • Af - Am • An - Ap • Aq - Ar • As - At • Au - Av

- Accountability in Research
Policies and Quality Assurance
- Accounting, Business & Financial History
- Accounting Education
An International Journal
- Accounting in Europe
- Acta Agriculturae Scandinavica, Section B - Animal Sciences **2**
- Acta Agriculturae Scandinavica, Section B - Plant Soil Science
- Acta Borealia
A Nordic Journal of Circumpolar Societies
- Acta Dermato-Venereologica
- Acta Obstetrica et Gynecologica Scandinavica

1. เลือกอักษรตัวแรกของชื่อสิ่งพิมพ์
2. เลือกชื่อสิ่งพิมพ์ที่ต้องการ

BROWSE BY SUBJECTS

CHIANG MAI UNIVERSITY

SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?



Journals

HOME | SEARCH | BROWSE

Titles

Subjects

Authors

⊕ Agriculture, Geography & Environmental Sciences | [More about this subject](#) | [Create alert](#) | [RSS](#)

⊕ Behavioral Sciences | [More about this subject](#) | [Create alert](#) | [RSS](#)

⊕ Bioscience | [More about this subject](#) | [Create alert](#) | [RSS](#)

⊕ Computing & Information Technology | [More about this subject](#) | [Create alert](#) | [RSS](#)

⊕ Algorithms & Complexity | [Create alert](#) | [RSS](#)

⊕ Artificial Intelligence | [Create alert](#) | [RSS](#)

⊖ International Journal of Control

⊖ International Journal of Distributed Sensor Networks

⊖ International Journal of General Systems

⊖ International Journal of Systems Science

⊖ International Journal of Computer Mathematics

⊖ Journal of Engineering Design

เลือกชื่อสิ่งพิมพ์ตามหัวเรื่องที่สนใจ

BROWSE BY AUTHORS

informaworld™

HOME . ABOUT US . CONTACT US

eBooks

Journals

Reference Works

Abstract Databases

HELP . PUBLISH WITH US . LIBRARIANS

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in

or Explore

- ▶ Browse **Publications** A-Z
- ▶ Browse **Subjects** A-Z
- ▶ **Advanced Search**

▶ CHIANG MAI UNIVERSITY

▶ SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?

Journals

HOME | SEARCH | BROWSE

Titles

Subjects

Authors

A • B • C • **D** • E • F • G • H • I • J • K • L • M • N • O • P • Q • R • S • T • U • V • W • X • Y • Z

D • Da • Db • Dd • De • Df • Dg • Dh • Di • Dj • Dn • Do • Dp • Dt • Du • Dv • Dz

D' Alelio, G. F.

Polymeric Schiff Bases. IX. The Syntheses of Polymeric Schiff Bases from Acetals and Amine Compounds

D' Alessio, Giovanni

Patterns of change in Italian regional markets: a multistep principal components analysis

D' auria, Gabriella



Characterization of Cured Rubber Modified Polyester Resins by Nuclear Magnetic Resonance Methods

D' Aversa, Teresa G.

Expression of chemokines by human fetal microglia after treatment with the human immunodeficiency virus type 1 protein Tat

1. เลือกอักษรตัวแรกของชื่อผู้แต่ง
2. เลือกชื่อสิ่งพิมพ์ของผู้แต่งที่ต้องการ







BROWSE JOURNALS


CHIANG MAI UNIVERSITY | SIGN IN | Register | Why Register? | Sign Out | Got a Voucher? |  

Journals


HOME | SEARCH | BROWSE

Issues List | Latest Issue | Aims & Scope | Editorial Board | Instructions for Authors | Subscribe


 Recommend |  Mark |  Alert |  Link |  Print |  RSS



Taylor & Francis
Taylor & Francis Group



Search within this journal




peer review
Integrity

About this Journal
[Abstracting & Indexing](#)
[What is iFirst?](#)

Copyright
[Reprints](#)

Advances in Physics

2005 Impact Factor: 10.421 (Thomson ISI Journal Citation Reports 2006)

ISSN: 1460-6976 (electronic) 0001-8732 (paper)
Publication Frequency: 6 issues per year
Subjects: Condensed Matter Physics; General Physics; Physical Sciences: Materials Science; Physical Sciences: Materials Science; Matter & Solid State Physics;
Publisher: Taylor & Francis
You have:  ACCESS

- Volume 55
 - [Issue 5 & 6 2006](#)
 - [Issue 3 & 4 2006](#)
 - [Issue 1 & 2 2006](#)
- Volume 54
- Volume 53
- Volume 52
- Volume 51
- Volume 50
- Volume 49
- Volume 48
- Volume 47
- Volume 46
- Volume 45
- Volume 44
- Volume 43
- Volume 42
- Volume 41

1

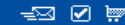
2

1. เลือกดูรายละเอียดของวารสารที่ Abstracting & Indexing
2. เลือกฉบับและเล่มที่ต้องการ

BROWSE JOURNALS : ABSTRACTING & INDEXING

CHIANG MAI UNIVERSITY

SIGN IN Register | Why Register? | Sign Out | Got a Voucher?



Journals

HOME | SEARCH | BROWSE

Issues List

Latest Issue

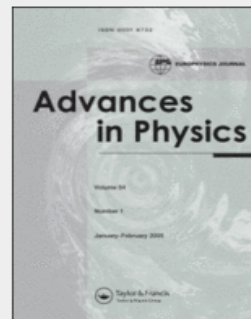
Aims & Scope

Editorial Board

Instructions for Authors

Subscribe

Recommend Mark Alert Link Print RSS



Search within this journal

Go



About this Journal

Abstracting & Indexing
What is iFirst?

Copyright

Reprints

Advances in Physics

2005 Impact Factor: 10.421 (Thomson ISI Journal Citation Reports 2006)

ISSN: 1460-6976 (electronic) 0001-8732 (paper)

Publication Frequency: 6 issues per year

Subjects: Condensed Matter Physics; General Physics; Physical Sciences: Materials Science; Physical Sciences: Materials Science; Matter & Solid State Physics;

Publisher: Taylor & Francis

You have: ACCESS

Abstracting & Indexing

Advances in Physics is abstracted in: Science Citation Index; INSPEC; ISI; Engineering Information Inc; Chemical Abstracts Service; EBSCO Publishing; International Bibliography of the Social Sciences; ISI Cambridge Scientific Abstracts; Astrophysics Data System; SciBase and SCOPUS.

2005 Impact Factor: 10.421 (©Thomson ISI Journal Citation Reports 2006)



Coming soon to this journal

BROWSE JOURNALS : TABLE OF CONTENT

informaworld™

HELP · PUBLISH WITH US · LIBRARIANS

HOME · ABOUT US · CONTACT US

eBooks Journals Reference Works Abstract Databases

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in GO ?
or Explore GO ?

► Browse **Publications** A-Z
► Browse **Subjects** A-Z
► **Advanced Search**

► CHIANG MAI UNIVERSITY ► SIGN IN Register | Why Register? | Sign Out | Got a Voucher?

Journals

HOME | SEARCH | BROWSE

Issues List Latest Issue Aims & Scope Editorial Board Instructions for Authors Subscribe

earliest prev issues next latest

Recommend Mark Alert Link Print RSS

Taylor & Francis
Taylor & Francis Group



Search within this journal

Go

peer review
Integrity

About this Journal

Advances in Physics, Volume 55 Issue 5 & 6 2006

2005 Impact Factor: 10.421 (Thomson ISI Journal Citation Reports 2006)

ISSN: 1460-6976 (electronic) 0001-8732 (paper)

Publication Frequency: 6 issues per year

Subjects: Condensed Matter Physics; General Physics; Physical Sciences: Materials Science; Physical Sciences: Materials Science; Matter & Solid State Physics;

Publisher: Taylor & Francis

You have: ACCESS

iFirst

Coming soon to this journal

Selected: Choose an Action: Go ?

Original Articles

- New trends in density matrix renormalization**
Author: Karen A. Hallberg 477 — 526
DOI: 10.1080/00018730600766432
- Quantum graphs: Applications to quantum chaos and universal spectral statistics**
Authors: Sven Gnutzmann; Uzy Smilansky 527 — 625
DOI: 10.1080/00018730600908042

เลือกเรื่องที่ต้องการ

ADVANCED SEARCH

Journals

HOME | SEARCH | BROWSE

Advanced Search

Citation Search

CrossRef Search

Search History

Search articles and chapters for:

1. ALL words in Article/Chapter Title
2. ALL words in
3. ALL words in
4. ALL words in

Use stemming? ?

Search Within:

Journals

My subscriptions only

Subject: ?

hide

Limit to the following subjects [add subject to list]

5. There are no selected subjects.

Date Published:

hide

All

In the last 1 Week

Between 1 January 1923 and 31 December 2007

Order Results by:

hide

Relevance

Oldest

Newest

Results per Page:

hide

Display 10 results per page

Search

Advanced Search

The advanced search form allows you to create an explicit search for journal articles, eBook chapters, reference work articles in our primary publications and publications within our abstract database products. You can enter multiple search terms, and define the field in which you want to look for the term. You can use boolean operators to build up your search expression. For more specific help on each section of the search form and what you can do with it, please click on the help links (?) next to the sections in question.

1. พิมพ์คำค้น

2. ระบุรูปแบบที่สัมพันธ์กับคำค้น

3. ระบุเขตข้อมูล

4. ระบุคำเชื่อม

5. ระบุหัวข้อเรื่องที่น่าสนใจ

6. ระบุช่วงเวลา

7. เลือกรูปแบบการแสดงผล

8. ระบุจำนวนผลลัพธ์ต่อหน้าจอ

9. คลิก Search

ADVANCED SEARCH : ADD SUBJECT LIST

Journals
HOME | SEARCH | BROWSE

Advanced Search Citation Search

Search articles and chapters for:

AND AND

Use stemming? ?

Search Within:

Journals
 My subscriptions only

Subject: ? [Done](#)

Limit to the following subjects [[add subject to list](#)]

There are no se

Date Published:

All
 In the last 1 Week
 Between 1 / January / 1923 and 31 / D

Order Results by:

Relevance
 Oldest
 Newest

Results per Page: [hide](#)


http://www.informaworld.com - Search - Microsoft Internet Explorer

Add subject

Please choose the subject you would like to add and then click on the add link

Subject: -- No subject chosen --

- No subject chosen --
- Agriculture, Geography & Environmental Sciences
- Behavioral Sciences
- Bioscience
- Computing & Information Technology
- Development Studies, Environment, Social Work, Urban Studies
- Earth Sciences
- Economics, Finance, Business & Industry
- Education
- Engineering
- Food Science & Technology
- Geography
- Humanities
- Information Science
- Interdisciplinary Studies
- Language & Literature
- Law
- Mathematics
- Medicine, Dentistry, Nursing & Allied Health
- Museum, Heritage Studies & Visual Arts
- Physical Sciences
- Reference & Information Science
- Social Sciences**
- Sports ,Leisure, Travel & Tourism
- The Arts



เลือกหัวข้อที่ต้องการ

ADVANCED SEARCH : ADD SUBJECT LIST

Journals
HOME | SEARCH | BROWSE

Advanced Search Citation Search

Search articles and chapters for:

AND [v] []
AND [v] []

Use stemming? [?]

Search Within:

Journals
 My subscriptions only

Subject: [?]

Limit to the following subjects [add subject to list]

There are no selected subjects.

Date Published: hide

All
 In the last 1 Week [v]
 Between 1 [v] / January [v] / 1923 [v] and 31 [v] / December [v] / 2007 [v]

Order Results by: hide

Relevance
 Oldest
 Newest

Results per Page: hide

http://www.informaworld.com - Search - Microsoft Internet Explorer

Add subject

Please choose the subject you would like to add and then click on the add link

Subject: Social Sciences [v]

Sub-subject: [v]

- Anthropology
- Education
- Gender Studies
- Military & Strategic Studies
- Politics & International Relations
- Sociology & Social Policy

h
arch form
te an
journal
apters,
icles in our
ns and
n our
products.
multiple
d define the
want to
You can
use boolean operators to
build up your search
expression. For more
specific help on each section
of the search form and what
you can do with it, please
click on the help links () next
to the sections in question.

เลือกหัวข้อเรื่องย่อยที่ต้องการ

CITATION SEARCH

informaworld™

HOME . ABOUT US . CONTACT US

eBooks

Journals

Reference Works

Abstract Databases

HELP . PUBLISH WITH US . LIBRARIANS

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in

or Explore

- ▶ Browse **Publications** A-Z
- ▶ Browse **Subjects** A-Z
- ▶ **Advanced Search**

▶ CHIANG MAI UNIVERSITY

▶ SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?

Journals

HOME | SEARCH | BROWSE

Advanced Search

Citation Search

CrossRef Search

Search History

Search for an article based on its citation details

Citation Search

Publication:

Words in Publication Name

Exact Citation Name

ISSN/ISSN

Article/Chapter Title:

Author:

Volume:

Issue:

Year:

Page:

Citation Search

If you know the details of the article you are looking for, please enter them in the form.

If you are interested in any articles in a topic, please use the [advanced search form](#).

If you would like to find a journal or an eBook rather than an article or chapter please use the quick search tool at the top of the page.

1. ระบุชื่อสิ่งพิมพ์

2. เลือกรูปแบบที่สัมพันธ์กับคำค้น

3. ใส่ข้อมูลอ้างอิง ได้แก่ Volume, Issue, Year และ Page

4. คลิก Search

SEARCH RESULT

informaworld™

HOME . ABOUT US . CONTACT US

eBooks

Journals

Reference Works

Abstract Databases

HELP . PUBLISH WITH US . LIBRARIANS

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in

or Explore

- ▶ Browse **Publications** A-Z
- ▶ Browse **Subjects** A-Z
- ▶ **Advanced Search**

▶ CHIANG MAI UNIVERSITY

▶ SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?

Journals

HOME | SEARCH | BROWSE

Advanced Search

Citation Search

CrossRef Search

Search History

Results

You searched for: **catalysis** (source publication) AND **43** (volume) AND **1** (issue) AND **31** (page)

1 results

Display: Citation only | Citation & Abstract

2 [New search](#) | [Modify your search](#)
1 to 1 of 1 results

↴

Selected:

ONBOARD FUEL CONVERSION FOR **1 GEN-FUEL-CELL-DRIVEN VEHICLES**

David L. Trimm; Z. Ilgen Önsan

Catalysis Reviews; May 2001; Volume 43 No. 1 Pages 31 - 84

DOI: 10.1081/CR-100104386

ACCESS

↵

1. เลือกเรื่องที่ต้องการ

2. ปรับปรุงการสืบค้นหรือเริ่มต้นใหม่

ARTICLE

databases.

CHIANG MAI UNIVERSITY

SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?



Journals

HOME | SEARCH | BROWSE

Issues List

Latest Issue

Volume 43 Issue 1 & 2

Subscribe

Article

References

Cited By

Related articles

[back to search results](#) [previous search result](#) [next search result \(1 of 1\)](#)

[Download Citation](#) [Recommend](#) [Mark](#) [Alert](#) [Link](#) [Print](#) [RSS](#)



Search within this journal

Go

About this Journal

[Abstracting & Indexing](#)

Copyright

[Reprints](#)

ONBOARD FUEL CONVERSION FOR HYDROGEN-FUEL-CELL-DRIVEN VEHICLES

Authors: David L. Trimm^a, Z. Ilgen Önsan^b

Affiliation: ^aCSIRO, St. Ivel, 2470, Australia
^bYildiz Technical University, 80815, Bebek, Istanbul, Turkey

DOI: 10.1080/00102360500042111
Published online: 1 & 2 May 2001, pages 31 - 84

Subject: [Physical Chemistry](#);

Formats available: HTML (English) : PDF (English)

You have: [ACCESS](#)

[View Article \(PDF\)](#) [View Article \(HTML\)](#) [View Article Section-at-a-time \(HTML\)](#)

Abstract

Increasingly stringent legislation controls emissions from internal combustion engines to the point where alternative power sources for vehicles are necessary. The hydrogen fuel cell is one promising option, but the nature of the gas is such that the conversion of other fuels to hydrogen on board the vehicle is necessary.

The conversion of methanol, methane, propane, and octane to hydrogen is reviewed. A combination of oxidation and steam reforming (indirect partial oxidation) or direct partial oxidation are the most promising processes. Indirect partial oxidation involves combustion of part of the fuel to produce sufficient heat to drive the endothermic steam reforming reaction. Direct partial oxidation is favored only at high temperatures and short residence times but is highly selective. However, indirect partial oxidation is shown to be the preferred process for all fuels.

The product gases can be taken through a water-gas shift reactor, but still retain ~2% carbon monoxide, which poisons fuel-cell catalysts. Selective oxidation is the preferred route to removal of residual carbon monoxide. Low-temperature oxidation in the absence and presence of an excess of hydrogen is reviewed. Au-based catalysts show much promise, but precious metal catalysts such as Pt/zeolite have some advantages.

Keywords: Hydrogen; Fuel cell; Onboard hydrogen generation; Hydrocarbon partial oxidation

[view references \(216\)](#) : [view citations](#)

ถ่ายโอนรายการ
บรรณานุกรม

ส่งพิมพ์

ARTICLE

databases.

CHIANG MAI UNIVERSITY

SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?



Journals

HOME | SEARCH | BROWSE

Issues List

Latest Issue

Volume 43 Issue 1 & 2

Subscribe

Article

References

Cited By

Related articles

back to search results | previous search result | next search result (1 of 1)

Download Citation | Recommend | Mark | Alert | Link | Print | RSS



Search within this journal

Go

About this Journal

Abstracting & Indexing

Copyright

Reprints

ONBOARD FUEL CONVERSION FOR HYDROGEN-FUEL-CELL-DRIVEN VEHICLES

Authors: David L. Trimm ^a; Z. Ilse Önsan ^b

Affiliations: ^a University of New South Wales, Sydney, 2052, Australia

^b Department of Chemical Engineering, Bogaziçi University, 80815, Bebek, Istanbul, Turkey

DOI: 10.1081/CR-100104386

Publication Frequency: 4 issues per year

Published in: Catalysis Reviews, Volume 43, Issue 1 & 2 May 2001, pages 31 - 84

Subject: Physical Chemistry;

Formats available: HTML (English) : PDF (English)

You have: ACCESS

View Article (PDF) View Article (HTML) View Article Section-at-a-time (HTML)

Abstract

Increasingly stringent legislation controls emissions from internal combustion engines to the point where alternative power sources for vehicles are necessary. The hydrogen fuel cell is one promising option, but the nature of the gas is such that the conversion of other fuels to hydrogen on board the vehicle is necessary.

Conversion of hydrocarbons to hydrogen is reviewed. A combination of oxidation and steam reforming are the most promising processes. Indirect partial oxidation involves combustion of part of the hydrocarbon followed by steam reforming reaction. Direct partial oxidation is favored only at high temperatures. However, indirect partial oxidation is shown to be the preferred process for all hydrocarbons.

The product gases can be taken through a water-gas shift reactor, but still retain ~2% carbon monoxide, which poisons fuel-cell catalysts. Selective oxidation is the preferred route to removal of residual carbon monoxide. Low-temperature oxidation in the absence and presence of an excess of hydrogen is reviewed. Au-based catalysts show much promise, but precious metal catalysts such as Pt/zeolite have some advantages.

Keywords: Hydrogen; Fuel cell; Onboard hydrogen generation; Hydrocarbon partial oxidation

[view references \(216\)](#) : [view citations](#)

เลือกรูปแบบการแสดงผล
เอกสารฉบับเต็ม

ARTICLE : CITED BY

CHIANG MAI UNIVERSITY

SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?



Journals

HOME | SEARCH | BROWSE

Issues List

Latest Issue

Volume 43 Issue 1 & 2

Subscribe

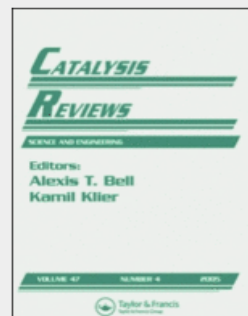
Article

References

Cited By

Related articles

Download Citation | Recommend | Mark | Alert | Link | Print | RSS



Search within this journal

Go

About this Journal

Abstracting & Indexing

Copyright

Reprints

ONBOARD FUEL CONVERSION FOR HYDROGEN-FUEL-CELL-DRIVEN VEHICLES

Authors: David L. Trimm ^a; Z. Ilse Önsan ^b

Affiliations: ^a University of New South Wales, Sydney, 2052, Australia

^b Department of Chemical Engineering, Bogaziçi University, 80815, Bebek, Istanbul, Turkey

DOI: 10.1081/CR-100104386

Publication Frequency: 4 issues per year

Published in: Catalysis Reviews, Volume 43, Issue 1 & 2 May 2001, pages 31 - 84

Subject: Physical Chemistry;

Formats available: HTML (English) : PDF (English)

You have: ACCESS

Cited By



Selected: Choose an Action: Go



Proton-Exchange Membrane Fuel Cells

Pyounggho Choi; Pradeep Halder; Ravindra Datta

Encyclopedia of Chemical Processing; November 2005; Pages 2501 - 2530

DOI: 10.1081/E-ECHP-120007780



New Trends in Reforming Technologies: from Hydrogen Industrial Plants to Multifuel Microreformers

P. Ferreira-Aparicio; M. J. Benito; J. L. Sanz

Catalysis Reviews; October 2005; Volume 47 No. 4 Pages 491 - 588

DOI: 10.1080/01614940500364958

ACCESS



A Methanol Steam Micro-Reformer for Low Power Fuel Cell Applications

V. Cominos; S. Hardt; V. Hessel; G. Kolb; H. Löwe; M. Wichert; R. Zapf

Chemical Engineering Communications; January 2005; Volume 192 No. 5 Pages 685 - 698

DOI: 10.1080/009864490510923

ACCESS



บทความที่อ้างอิง
บทความที่เปิดอ่านอยู่

ARTICLE : REFERENCES

CHIANG MAI UNIVERSITY

SIGN IN Register Why Register? Sign Out Got a Voucher?



Journals

HOME | SEARCH | BROWSE

Issues List

Latest Issue

Volume 43 Issue 1 & 2

Subscribe

Article

References

Cited By

Related articles

Download Citation Recommend Mark Alert Link Print RSS



Taylor & Francis
Taylor & Francis Group



Search within this journal

Go

About this Journal

[Abstracting & Indexing](#)

Copyright

[Reprints](#)

ONBOARD FUEL CONVERSION FOR HYDROGEN-FUEL-CELL-DRIVEN VEHICLES

Authors: David L. Trimm^a; Z. Ilse Önsan^b

Affiliations: ^a University of New South Wales, Sydney, 2052, Australia

^b Department of Chemical Engineering, Bogaziçi University, 80815, Bebek, Istanbul, Turkey

DOI: 10.1081/CR-100104386

Publication Frequency: 4 issues per year

Published in: [Catalysis Reviews](#), Volume 43, Issue 1 & 2 May 2001, pages 31 - 84

Subject: Physical Chemistry;

Formats available: HTML (English) : PDF (English)

You have: ACCESS

References

1. Cooper, B. (1994) *J. Plat. Metals Rev.* **38** , p. 2.
2. Burke, N. R., Trimm, D. L. and Howe, R. (2000) to be presented at the 12th International Congress on Catalysts Granada
3. Matsumoto, S., Ikeda, Y., Suzuki, H., Ogai, M. and Miyoshi, N. (2000) *Appl. Catal. B: Environ.* **25** , p. 115. [\[crossref\]](#)
4. Ralph, T. R. and Hards, G. A. (1998) *Chem. Ind.* p. 327.
5. Raman, V. (1997) *Chem. Ind.* p. 771.
6. Prigeut, M., Dezael, C. and Breele, Y. (1970) *Proc. 5th IECEC* p. p.111.
7. Vielstich, W. and Iwasita, T. (Ertl, G., Knozinger, H. and Weitkamp, J. eds.) (1997) *Handbook of Heterogeneous Catalysis* **4** , p. 2090. Wiley-VCH, New York
8. Cameron, D. S. (1999) *Plat. Metals Rev.* **43** , p. 149.
9. Hoogers, G. and Thompsett, D. (1999) *Chem. Ind.* p. 796.
10. Hill, S. (1996) *New Sci.* p. 20.
11. Jamal, Y. and Wyszynski, M. L. (1994) *Int. J. Hydrogen Energy* **19** , p. 557. [\[crossref\]](#) [\[pubmed\]](#)
12. Golunski, S. (1998) *Plat. Metals Rev.* **42** , p. 2.
13. Jiang, C., Trimm, D. L. and Wainwright, M. S. (1995) *Chem. Eng. Tech.* **18** , p. 1. [\[crossref\]](#)
14. Pena, M. A., Gomez, J. P. and Fierro, J. L. G. (1996) *Appl. Catal. A: Gen.* **144** , p. 7. [\[crossref\]](#)
15. Boudart, M., Luss, J. P., (Bilou, D. M. eds.) (1998) *Methods in Catalysis: Fundamentals and Applications*


ARTICLE : RELATED ARTICLES


CHIANG MAI UNIVERSITY | SIGN IN | Register | Why Register? | Sign Out | Got a Voucher? | [Email] [Check] [Shopping Cart]

Journals
HOME | SEARCH | BROWSE

Issues List | Latest Issue | Volume 43 Issue 1 & 2 | Subscribe | Article | References | Cited By | **Related articles**

Download Citation | Recommend | Mark | Alert | Link | Print | RSS

 Taylor & Francis
Taylor & Francis Group




Search within this journal

Go

About this Journal
Abstracting & Indexing



Copyright
Reprints







ONBOARD FUEL CONVERSION FOR HYDROGEN-FUEL-CELL-DRIVEN VEHICLES

Authors: David L. Trimm ^a; Z. Ilseñ Önsan ^b
Affiliations: ^a University of New South Wales, Sydney, 2052, Australia
^b Department of Chemical Engineering, Bogaziçi University, 80815, Bebek, Istanbul, Turkey
DOI: 10.1081/CR-100104386
Publication Frequency: 4 issues per year
Published in:  Catalysis Reviews, Volume 43, Issue 1 & 2 May 2001, pages 31 - 84
Subject: Physical Chemistry;
Formats available: HTML (English) : PDF (English)
You have:  ACCESS

Related Articles

9 results ordered by relevance

↕ Selected: Choose an Action:  Go 

- Radioactivity from a Nuclear Fuel Reprocessing Plant Found in Natural Waters**
Doreen F. Ruppert; George W. Pilgrim; Philip K. Hopke
 *International Journal of Environmental Analytical Chemistry*; January 1975; Volume 4 No. 1 Pages 65 - 74
DOI: 10.1080/03067317508071102
 ACCESS
- Comparison of Methods to Determine Oxygen Demand for Bioremediation of a Fuel Contaminated Aquifer**
R. M. Powell; R. W. Callaway; J. T. Michalowski; S. A. Vandegrift; M. V. White; D. H. Kampbell; B. E. Bledsoe; J. T. Wilson
 *International Journal of Environmental Analytical Chemistry*; November 1988; Volume 34 No. 3 Pages 253 - 263
DOI: 10.1080/03067319808026842
 ACCESS
- Multi-paradigm multi-scale simulations for fuel cell catalysts and membranes**
W. Goddard III; B. Merinov; A. van Duin; T. Jacob; M. Blanco; V. Molinero; S. S. Jang; Y. H. Jang
 *Molecular Simulation*; January 2006; Volume 32 No. 3 Pages 251 - 268
DOI: 10.1080/08927020600599709
 ACCESS

บทความที่มีเนื้อหาใกล้เคียงกัน

FULL TEXT : HTML

informaworld™

HOME . ABOUT US . CONTACT US

eBooks

Journals

Reference Works

Abstract Databases

HELP . PUBLISH WITH US . LIBRARIANS

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in

or Explore

► Browse **Publications** A-Z

► Browse **Subjects** A-Z

► **Advanced Search**

► CHIANG MAI UNIVERSITY

► SIGN IN

[Register](#) | [Why Register?](#) | [Sign Out](#) | [Got a Voucher?](#)

prev abstract next

ONBOARD FUEL CONVERSION FOR HYDROGEN-FUEL-CELL-DRIVEN VEHICLES

I. INTRODUCTION

II. BASIC REACTIONS

III. INDIRECT PARTIAL OXIDATION

IV. DIRECT PARTIAL OXIDATION

V. LOW-TEMPERATURE REMOVAL OF CARBON MONOXIDE

VI. WHICH FUEL? WHICH SYSTEM?

ACKNOWLEDGMENT

REFERENCES

[List of Figures](#)

[List of Tables](#)

ONBOARD FUEL CONVERSION FOR HYDROGEN-FUEL-CELL-DRIVEN VEHICLES

Authors: David L. Trimm ^a; Z. Ilgen Önsan ^b

Affiliations: ^a University of New South Wales, Sydney, 2052, Australia

^b Department of Chemical Engineering, Bogaziçi University, 80815, Bebek, Istanbul, Turkey

DOI: 10.1081/CR-100104386

Publication Frequency: 4 issues per year

Published in: [Catalysis Reviews](#), Volume 43, Issue 1 & 2 May 2001, pages 31 - 84

Abstract

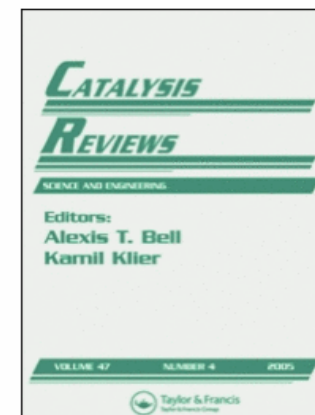
Increasingly stringent legislation controls emissions from internal combustion engines to the point where alternative power sources for vehicles are necessary. The hydrogen fuel cell is one promising option, but the nature of the gas is such that the conversion of other fuels to hydrogen on board the vehicle is necessary.

The conversion of methanol, methane, propane, and octane to hydrogen is reviewed. A combination of oxidation and steam reforming (indirect partial oxidation) or direct partial oxidation are the most promising processes. Indirect partial oxidation involves combustion of part of the fuel to produce sufficient heat to drive the endothermic steam reforming reaction. Direct partial oxidation is favored only at high temperatures and short residence times but is highly selective. However, indirect partial oxidation is shown to be the preferred process for all fuels.

The product gases can be taken through a water-gas shift reactor, but still retain ~2% carbon monoxide, which poisons fuel-cell catalysts. Selective oxidation is the preferred route to removal of residual carbon monoxide. Low-temperature oxidation in the absence and presence of an excess of hydrogen is reviewed. Au-based catalysts show much promise, but precious metal catalysts such as Pt/zeolite have some advantages.

Keywords: Hydrogen; Fuel cell; Onboard hydrogen generation; Hydrocarbon partial oxidation

I. INTRODUCTION



FULL TEXT : PDF

The screenshot shows the Adobe Reader interface. The title bar reads "Adobe Reader - [713625023_content[1].pdf]". The menu bar includes "File", "Edit", "View", "Document", "Tools", "Window", and "Help". The toolbar contains various icons, with "Save a Copy" and "Print" highlighted by a red box. A yellow box with the text "Print, Save" is connected to these icons by a red arrow. The main content area displays a PDF page with the following text:

This document is available from Taylor & Francis University (2007)
University (2007)
On: 20 February 2007
Access Details: [subscription number 769600652]
Publisher: Taylor & Francis
Informa Ltd Registered in England and Wales Registered Number: 1072954
Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK

Catalysis Reviews
Science and Engineering
Publication details, including instructions for authors and subscription information:
<http://www.informaworld.com/smpp/title~content=t713597232>
**ONBOARD FUEL CONVERSION FOR
HYDROGEN-FUEL-CELL-DRIVEN VEHICLES**
David L. Trimm^a; Z. Ilseñ Önsan^b
^a University of New South Wales, Sydney, 2052, Australia
^b Department of Chemical Engineering, Bogaziçi University, 80815, Bebek, Istanbul, Turkey

To link to this article: DOI: 10.1081/CR-100104386
URL: <http://dx.doi.org/10.1081/CR-100104386>

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>
This article maybe used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.
The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or

The interface also shows a "Pages" sidebar on the left, a "Comments" sidebar at the bottom left, and a status bar at the bottom indicating "1 of 56" pages.

DOWNLOAD CITAION

informaworld™

HELP . PUBLISH WITH US . LIBRARIANS

HOME . ABOUT US . CONTACT US

eBooks

Journals

Reference Works

Abstract Databases

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in

or Explore

- Browse **Publications** A-Z
- Browse **Subjects** A-Z
- **Advanced Search**

► CHIANG MAI UNIVERSITY

► SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?

Journals

HOME | SEARCH | BROWSE

Advanced Search

Citation Search

CrossRef Search

Search History

Results

You searched for: **catalysis** (source publication) AND **43** (volume)

12 results

Display: Citation only | Citation & Abstract

[New search](#) | [Modify your search](#)

1 to 10 of 12 results

<prev 1 2 next>

↗

Selected:

THE SELECTIVE CATALYTIC REDUCTION OF NITRIC OXIDE WITH METHANE OVER NONZEOLITIC CATALYSTS

Mark D. Fokema; Jackie Y. Ying

Catalysis Reviews; May 2001; Volume 43 No. 1 Pages 1 - 29

DOI: 10.1081/CR-100104385

ACCESS

ONBOARD FUEL CONVERSION FOR HYDROGEN-FUEL-CELL-DRIVEN VEHICLES

David L. Trimm; Z. Ilgen Önsan

Catalysis Reviews; May 2001; Volume 43 No. 1 Pages 31 - 84

DOI: 10.1081/CR-100104386

ACCESS

CHEMICAL MECHANISMS OF CATALYTIC CRACKING OVER SOLID ACIDIC CATALYSTS: ALKANES AND ALKENES

Iury V. Kissin

Catalysis Reviews; May 2001; Volume 43 No. 1 Pages 85 - 146

DOI: 10.1081/CR-100104387

ACCESS

METHANE COUPLING USING CATALYTIC MEMBRANE REACTORS

Yimin Liu; Xiaoyao Tan; K. Li; R. Hughes

Catalysis Reviews; May 2001; Volume 43 No. 1 Pages 147 - 198

DOI: 10.1081/CR-100104388

ACCESS

Choose an Action:

Add to shopping cart

Add to marked list

Download Citation

1. เลือกรายการที่ต้องการ

2. เลือกที่ Download Citation แล้วคลิก Go

DOWNLOAD CITAION

informaworld™
HOME . ABOUT US . CONTACT US

eBooks Journals Reference Works Abstract Databases

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

CHIANG MAI UNIVERSITY

Journals
HOME | SEARCH | BRO

Choose a format: EndNote Direct Export

Choose detail required:
 Citation only
 Citation and Abstract

Choose delivery method:
 View on screen
 Download file
 Email

Go Cancel

1. เลือกโปรแกรมที่ต้องการ
3. เลือกที่ Download file

2. เลือกรูปแบบข้อมูล
4. คลิก GO

CROSSREF SEARCH

informaworld™

HELP . PUBLISH WITH US . LIBRARIANS

HOME . ABOUT US . CONTACT US

eBooks

Journals

Reference Works

Abstract Databases

Providing cross-searchable access to journals, eBooks, reference works and abstract databases.

Search in

or Explore

- Browse **Publications** A-Z
- Browse **Subjects** A-Z
- **Advanced Search**

► CHIANG MAI UNIVERSITY

► SIGN IN

Register | Why Register? | Sign Out | Got a Voucher?



Journals

HOME | SEARCH | BROWSE

Advanced Search

Citation Search

CrossRef Search

Search History

Results

CrossRef Search
publisher pilot for full-text scholarly research
POWERED BY Google™

Note, your CrossRef search results will open in a separate window.

CrossRef Search

Please enter a search term to find results for Taylor & Francis publications as well as those from other selected publisher members of CrossRef.

The search is powered by Google and only searches content submitted to CrossRef by participating publishers.

1. พิมพ์คำค้น

2. คลิก Search

CROSSREF SEARCH



เว็บ รูปภาพ กลุ่มข่าว สารบบเว็บ

plastic

ค้นหา

การค้นหาขั้นสูง
คำสั่งค่า

เข้าสู่ระบบ

เว็บ

ผลการค้นหา 11 - 20 รายการจากประมาณ 1,200,000 สำหรับคำว่า plastic. (0.05 วินาที)

Thai-Plastic.com

www.thai-plastic.com

Thailand Plastics Web Portal Directory, Procurement, Classifieds

ลิงค์ผู้สนับสนุน

ผู้สนับสนุน

[Plastic Parts](#)

20 Years Experience in **Plastic** Part
Able to Follow All Customer's Needs
www.BangbonPlastic.com

[ธุรกิจรีไซเคิล ครบวงจร](#)

พลาสติก ทองแดง เครื่องจักร อบรมมา
อยากทำธุรกิจ รีไซเคิล เราช่วยได้
www.Rux69.com

[MOLDIMPACT.Lda](#)

Gestão de projectos para moldes.
Managing Mould Making projects.

The Source for Quality Suppliers.
GlobalSources.com

[Organic electronics: The WORM's turn](#)

Lightweight inexpensive organic electronic components can be printed onto **plastic**, glass or metal foils, but until now little attention has been paid to ...

www.nature.com/nature/links/031113/031113-5.html - 7k - [หน้าที่ถูกเก็บไว้](#)

[news @ nature.com - Fungus eats enduring plastic - Voracious ...](#)

A fungus that normally eats wood can also chew up some of the long-lasting **plastic** resins that clog landfill sites, researchers in the United States have ...

www.nature.com/news/2006/060605/full/060605-5.html

[news @ nature.com - Plastic brains help the blind place sounds ...](#)

8 February 2007. nav nav. News. Published online: 25 January 2005; | doi:10.1038/news050124-6. **Plastic** brains help the blind place sounds. Roxanne Kl ...
www.nature.com/news/2005/050124/full/050124-6.html

[news @ nature.com - Plastic heals itself - Heat stops new material ...](#)

A new **plastic** mends its own cracks. Tough and transparent, the material heals ... Although not the first self-healing **plastic**, it is the first to reforge ...

www.nature.com/news/2002/020225/full/020225-11.html

[Plastic and Reconstructive Surgery - February 2007, Volume 119 ...](#)

Plastic and Reconstructive Surgery: Official Organ of the **Plastic** Surgery Research Council-A Reality Long Overdue. Rod J. Rohrich, M.D.; Michael T. Longaker ...

www.plasreconsurg.com/pt/re/prs/currenttoc.

html.jsessionid=EPB42FBbSS45sC54vPKnkliQjug7Z5V3e7g7iyDC4220b20...

[Plastic and Reconstructive Surgery - journalinfo](#)

brandonhill For more than 50 years **Plastic** and Reconstructive Surgery® has been the one consistently excellent reference for every specialist who uses ...

www.plasreconsurg.com/pt/re/prs/journalinfo.

html.jsessionid=GwMNVGbBM95nycJxhdMXzxbdwp9xG81SbwLTLQh9QDv65...

[Soft, conformable electrical contacts for organic semiconductors ...](#)

In this approach, a thin elastomeric film on a **plastic** substrate supports the electrodes and interconnections: laminating this substrate against another ...

เลือกกราฟที่ต้องการ



Taylor & Francis