



PubMan

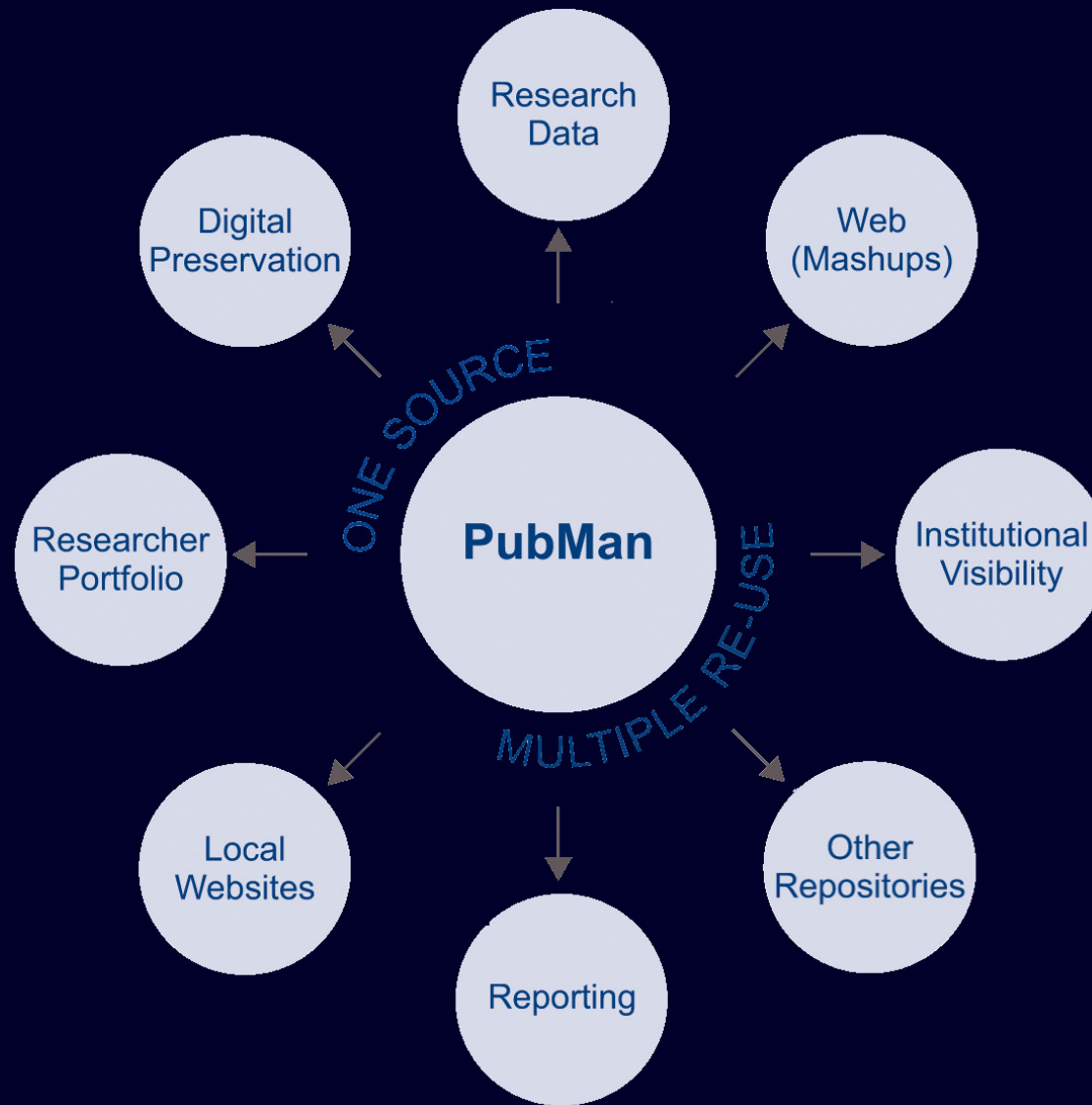
One Repository with Multiple Usage and Re-Use Possibilities

Juliane Müller

The 5th International Conference on Open Repositories
Madrid, Spain
July 6th 2010

PubMan is a Web Application Based on eSciDoc

- Future repository of the Max Planck Society for managing, disseminating and re-using publications and research data
- eSciDoc
 - Joint activity of Max Planck Digital Library (MPDL) in Munich and Fachinformationszentrum (FIZ) in Karlsruhe
 - Development of an Open Source eResearch environment
- PubMan is one of currently four applications based on the eSciDoc infrastructure
- Open Source software with a growing community



The eSciDoc Infrastructure

- Service-oriented architecture (SOA), based on a Fedora Commons platform
- Characterized by a set of loosely connected services:
 - Persistent identification
 - Automatic versioning
 - Digital long-term preservation
 - Validating service
 - Transformation service
 - Data acquisition service
- Standardized interfaces such as OAI-PMH, SWORD, SOAP, RSS or REST

*You want to get more information about eSciDoc? Visit our BoF session here in Madrid!
Wednesday 7th, 17:30 – 19:00, Room Reino Unido A*



PubMan Functionalities

Juliane Müller | ログアウト | 連絡先 | ポリシー/免責事項 | ヘルプ | 日本語

SciDoc.PubMan PROJECT

検索: qa

検索

詳細検索 | ブラウス

全文含む

ホーム | 登録一覧 | 管理画面 | 新規登録 | 一時保存 (0)

一覧表示 | 絞り込み | ソート順変更 | ファイル形式で保存 | 選択したアイテムを一時保存へ追加

リスト形式で表示 | 表形式で表示


16件 (降順 ソート条件: 更新日)

25 件 | 前へ | 1 | 次へ | ページ移動: 1 / 1

登録状況	タイトル	作者	資料種別	日付	ファイル
<input type="checkbox"/> 仮保存	Protohalo Constraints to the Resonant Annihilation of Dark Matter	Cyr-Racine, Francis-Yan; Profumo, Stefano; Sigurdson, Kris	学術論文	2009-05-28, 修正	1ファイル
<input type="checkbox"/> 仮保存	Endoscopic treatment of vesicoureteral reflux: Current status	Läckgren, Göran	学術論文	2009, 作成	
<input type="checkbox"/> 仮保存	Loop Quantum Cosmology II: Effective theories and oscillating universes	Bojowald, M.; Tavakol, R.	書籍の一部	2008, 作成	
<input type="checkbox"/> 仮保存	The Inverted Big-Bang (Der umgestülpte Urknall)	Vaas, R.	学術論文	2004, 作成	

Juliane Müller | [Logout](#) | [Contact](#) | [Policy/Disclaimer](#) | [Help](#) | 日本語

Juliane Müller | [Logout](#) | [Contact](#) | [Imprint & Guidelines](#) | [Help](#) | Deutsch



Max-Planck-Institut für Gravitationsphysik
(Albert-Einstein-Institut)

[Detailsuche](#) | [Browse](#)

START MEINE DATENSÄTZE QA BEREICH DATENEINGABE ABLAGE (0)

ANSICHT [FILTER](#) [SORTIERUNG](#) [EXPORT](#) [ZUR ABLAGE HINZUFÜGEN](#)

Bibliographisch | **Tabellarisch**




16 Datensätze (absteigend sortiert nach Änderungsdatum)

25 Treffer je Seite [Vorhergehende](#) | 1 | [Nächste](#)

Start > Meine Datensätze

Meine Datensätze


Gehe zu Seite von 1

	Status	Mittlere Ansicht (alle Datensätze)
<input type="checkbox"/>	 Schwebend	<p>Protobal Constraints to the Resonant Annihilation of Dark Matter</p> <p>Mehr Urheber: Cyr-Racine, Francis-Yan; Profumo, Stefano; Sigurdson, Kris Datum: Erstellt: 2009-04-27 Geändert: 2009-05-28 Genre: Zeitschriftenartikel Dateien: 1 Datei externe Referenzen: -</p>
<input type="checkbox"/>	 Schwebend	<p>Endoscopic treatment of vesicoureteral reflux: Current status</p> <p>Mehr Urheber: Läckgren, Göran Datum: Erstellt: 2009 Genre: Zeitschriftenartikel Dateien: - externe Referenzen: -</p>
<input type="checkbox"/>	 Schwebend	<p>Loop Quantum Cosmology II: Effective theories and oscillating universes</p> <p>Mehr Urheber: Bojowald, M.; Tavakol, R. Datum: Erstellt: 2008 Genre: Buchkapitel Dateien: - externe Referenzen: -</p>

Juliane Müller | ログアウト
連絡先
ポリシー/免責事項
ヘルプ
日本語

Juliane Müller | Ausloggen
Kontakt
Leitlinien&Impressum
Hilfe
Deutsch

Juliane Müller | Logout
Contact us
Policy&Disclaimer
Help
English



Max Planck Digital Archive

START MY ITEMS QA WORKSPACE SUBMISSION BASKET (0)

Choose Submission Method > Choose Collection > Edit item

Easy Full Fetch/Import Multiple Import Import Workspace

This item is part of the Publications of the MPI for Gravitational Physics.

Advanced Search Browse

Include files

Edit item

[File](#) | [File Locators](#) | [Persons & Organizations](#) | [Content](#) | [Details](#) | [Source](#)

Basic

*Genre

*Title

File

Save file

Local File Path

File URL

File Locators

Save Locator

URL

Persons & Organizations

Add multiple

Role	Type	Family name	Given name	Org.n
-	Person	<input type="text"/>	<input type="text"/>	1

Organization Address

 buscar

postgrado executive in company pymes y emprendedores alumni actualidad investigación eoi
equipo académico proyectos biblioteca

inicio > investigación > biblioteca

biblioteca >> savia

INICIO ÚLTIMOS MÁS VISTOS TODOS



Login

Español

VER | ORDENAR | EXPORTAR | AÑADIR SELECCIONADOS A LA CESTA

Lista Bibliográfica | Vista Tabla

371 Items encontrados (descendente ordenados por Fecha de modificación)

Revisar la búsqueda Show Query

25 items por página

Anterior 1 2 3 4 5 6 7 Siguiente

Ir a página de 15

Inicio > Resultados de la búsqueda
Resultados de la búsqueda

Título	Fecha	Ficheros	Creador	Género	
Necesidades futuras para la dinamización de redes empresariales horizontales			Área de conocimiento y documentación, Decanato, EOI	Libro	2006-01-01, Publicado Impreso 1 Fichero
The spanish acorn : tiendas de productos gourmet españoles en USA			GARCÍA BOYADO, VICTORIA; GARCÍA PUJALTE, ÁNGEL; GARCÍA SANCHOS, JULIO; GÓMEZ-MARTELO GIL DE BERNABÉ, JORGE ...	Tesis	2006-01-01, Publicado Impreso 1 Fichero
Cearsa : compañía europea de aviones regionales.			COSTAS GORDO-PACHECO, MARÍA; GARRIDO GARCÍA, LUIS ANTONIO; LUCÍA DÍAZ, RAÚL; PIÑEIRO GARCÍA, JULIA ...	Tesis	2006-01-01, Publicado Impreso 1 Fichero

http://www.eoi.es/savia



[START](#) [MY ITEMS](#) [QA WORKSPACE](#) [SUBMISSION](#) [BASKET \(0\)](#)

[Easy](#) [Full](#) [Fetch/Import](#) [Multiple Import](#) [Import Workspace](#)

[Start](#) > [My Items](#) > [Choose Submission Method](#)

Submission Method

Easy

Description Using the easy submission one can enter stepwise information on a publication. At the end of the wizard one can save the item or switch to the full submission mask to add more details.

Full

Description The full submission offers a genre specific entry mask for entering reference data. Additionally one or more full texts can be uploaded and information on externally stored data (e.g. Supplementary Material) can be specified.

Fetch/Import

Description This method allows you to import a single BibTeX reference or it allows you to fetch metadata and full text(s) from other systems like arXiv or PubMed Central.

Multiple Import

Description This method allows you to import multiple items in a structured format (e.g. EndNote, BibTex).



Easy Full Fetch/Import Multiple Import Import Workspace

This item will be part of Publications of the MPI for Psycholinguistics.

Easy Submission

Step 1

Step 2

Step 3

Basic

*Genre

Journal Article

*Title

File

Save file

Durchsuchen...

[Upload file](#)

File URL

[Upload from URL](#)

File Locators

Save Locator

URL

[Save](#)

* Mandatory field

[Back](#)

[Next](#)

START MY ITEMS QA

START MY ITEMS QA WORKSPACE SUBMISSION BASKET (0)

Choose Submission Method > Choose Collection > Edit item

Easy Full Fetch/Import Multiple Import Import Workspace
This item will be part of Publication

Easy Full Fetch/Import Multiple Import Import Workspace

This item is part of the Publications of the MPI for Psycholinguistics.

Edit item

Step 1

Basic

File

File Locators

* Mandatory field

Back

Basic

*Genre

*Title

hide Basic

File

Save file

hide File

File Locators

Save Locator

hide File Locators

Persons & Organizations

Add multiple

Role

Given name

Org.ni

-

Person

1

Organization

Address

1

hide Persons & Organizations

Content

Free keywords

Classified Subject

Type

Value

DDC

Abstract

hide Content

File | File Locators | Persons & Organizations | Content | Details | Source

Journal Article

Journal Article

Book

Book Chapter

Proceedings

Conference Paper

Talk

Conference report

Poster

Teaching

Thesis

Working Paper

Report

Journal

Special Journal Issue

Series

Manuscript

Other

Newspaper Article

Manual

Editorial

+ -

Upload file

Upload from URL

Save URL

+ -

Home + -

+ -

+ -



[Easy](#) [Full](#) [Fetch/Import](#) [Multiple Import](#) [Import Workspace](#)

Fetch/Import

[Fetch from Source](#) | [Upload BibTeX file](#)

This item will be part of Publications of the MPI for Psycholinguistics.

Fetch/Import

Fetch from Source

Source

Identifier

- arXiv
- BioMed Central
- Spires
- eSciDoc
- PubMedCentral
- arXiv

Fetch file(s)

All available

None

[Cancel](#)

[Fetch](#)



[Choose Collection](#) > [Edit item](#) > [Easy Submission](#)

[Easy](#) [Full](#) [Fetch/Import](#) [Multiple Import](#) [Import Workspace](#)

Fetch/Import

[Fetch from Source](#) | [Upload BibTeX file](#)

[START](#) [MY ITEMS](#) [QA WORKSPACE](#) [SUBMISSION](#) [BASKET \(0\)](#)

[Choose Submission Method](#) > [Choose Collection](#) > [Multiple Import](#)

[Easy](#) [Full](#) [Fetch/Import](#) [Multiple Import](#) [Import Workspace](#)

Multiple Import

This item will be part of Publications of the MPI for Gravitational Physics.

Multiple Import

Import format

- EndNote
- EndNote
- BibTex
- RIS
- WOS
- MAB
- eDoc
- eSciDoc
- EndNote ICE
- eDoc AEI

Upload file

Durchsuchen...

Cancel

Import



[Choose Collection](#) > [Edit item](#) > [Easy Submission](#)

[Easy](#) [Full](#) [Fetch/Import](#) [Multiple Import](#) [Import Workspace](#)

[Fetch from Source](#) | [Upload BibTeX file](#)

Fetch/Import

[START](#) [MY ITEMS](#) [QA WORKSPACE](#) [SUBMISSION BASKET \(0\)](#)

[Easy](#) [Full](#) [Fetch/Import](#) [Multiple Import](#) [Import Workspace](#)

This item will be part of Publications of the MPI for Gravitational Physics.

[Choose Submission Method](#) > [Choose Collection](#) > [Multiple Import](#)

Multiple Import

Multiple Import

[START](#) [MY ITEMS](#) [QA WORKSPACE](#) [SUBMISSION BASKET \(0\)](#)

[Easy](#) [Full](#) [Fetch/Import](#) [Multiple Import](#) [Import Workspace](#)

[Start](#) > [Choose Submission Method](#) > [Import Workspace](#)

Import workspace

Status	Import	Format	Started	Finished	Details	Actions
 FINISHED	test 2 bibtex import	BibTex	2010-03-18 11:13	2010-03-18 11:13	View details	Remove Delete Submit Release
 FINISHED	test bibtex import	BibTex	2010-03-18 11:11	2010-03-18 11:11	View details	Remove Delete Submit Release
 FINISHED	eDoc Test 6.0.1 JM	eDoc	2010-02-11 14:07	2010-02-11 14:10	View details	Remove Delete Submit Release
 FINISHED	WoS Test 6.0.1 JM	WOS	2010-02-11 14:02	2010-02-11 14:03	View details	Remove Delete Submit Release
 FINISHED	RIS Test 6.0.1 JM	RIS	2010-02-11 13:56	2010-02-11 13:57	View details	Remove Delete Submit Release
 FINISHED	EndNote Test 6.0.1 JM	EndNote	2010-02-11 13:54	2010-02-11 13:55	View details	Remove Delete Submit Release
 FINISHED	BibTex Test 6.0.1 JM	BibTex	2010-02-11 13:53	2010-02-11 13:54	View details	Remove Delete Submit Release



Include files

Advanced Search

Word or Phrase	Search Term: <input type="text" value="language"/> <input type="button" value="+"/> <input type="button" value="-"/>
	<input type="radio"/> Title <input type="radio"/> Keywords <input checked="" type="radio"/> Any Field <input type="radio"/> Any & full text <input type="button" value="AND"/> <input type="button" value="v"/>
Person	Person <input type="text"/> <input type="button" value="+"/> <input type="button" value="-"/> <input type="checkbox"/> Author more.. <input type="button" value="AND"/> <input type="button" value="v"/>
Date	From <input type="text"/> To <input type="text"/> <input type="button" value="+"/> <input type="button" value="-"/> <input type="checkbox"/> published in print more.. <input type="button" value="AND"/> <input type="button" value="v"/>
Genre	<input type="button" value="+"/> show Genre
Organization	Organization <input type="text" value="MPI for Psycholinguistics"/> select <input type="button" value="+"/> <input type="button" value="-"/> <input type="button" value="AND"/> <input type="button" value="v"/>
Files & Locators	Files & Locators: <input type="text" value="with file(s)"/> <input type="button" value="v"/> Visibility: <input type="text" value="public"/> <input type="button" value="v"/> <input type="checkbox"/> has embargo date Content category: <input type="text" value="-"/> <input type="button" value="v"/> <input type="checkbox"/> exclude category <input type="button" value="+"/> <input type="button" value="-"/> <input type="button" value="AND"/> <input type="button" value="v"/>
Content & Details	<input type="button" value="+"/> show Content & Details
<input type="button" value="Clear All"/> <input type="button" value="Start Search"/>	



results
 Include files

HOME BASKET (0)

Home >Advanced Search
Advanced Search

Word or Phrase	Search Term: language	<input type="radio"/> Title	<input type="radio"/> Keywords	<input checked="" type="radio"/> Any Field	<input type="radio"/> Any & full text	<input type="button" value="AND"/> <input type="button" value="v"/>
Person	Person [input field]	<input type="checkbox"/> Author	<input type="button" value="more.."/>		<input type="button" value="AND"/> <input type="button" value="v"/>	
Date	From [input field] To [input field]	<input type="checkbox"/> published in print	<input type="button" value="more.."/>		<input type="button" value="AND"/> <input type="button" value="v"/>	
Genre	<input type="button" value="show Genre"/>					
Organization	Organization MPI for Psycholinguistics	<input type="button" value="select"/>		<input type="button" value="AND"/> <input type="button" value="v"/>		
Files & Locators	Files & Locators with file(s)	Visibility public	<input type="checkbox"/> has embargo date		<input type="button" value="AND"/> <input type="button" value="v"/>	
	Content category -	<input type="checkbox"/> exclude category		<input type="button" value="AND"/> <input type="button" value="v"/>		
Content & Details	<input type="button" value="show Content & Details"/>					
<input type="button" value="Clear All"/>						<input type="button" value="Start Search"/>



Go

Advanced Search

Organizations

Include files

HOME BASKET (0)

VIEW SORT EXPORT ADD SELECTED TO BASKET

Bibliographic List | Table View

1582 Items found (descending sorted by Modification Date)

Revise Search

Your exact query was:

```
{ ( escidoc.objecttype="item" ) and ( { escidoc.metadata="language" } and ( { escidoc.any-organization-pids="escidoc:55201" } and ( { escidoc.objecttype="item" } and ( { escidoc.component.creation-date>"" } ) and ( escidoc.component.visibility="public" ) ) ) ) and ( escidoc.content-model.objid="escidoc:persistent4" )
```

25



go



Previous

1

2

3

4

5

6

7

Next



Go to page

of 64 go

items per page

	Title	Creator	Genre	Date	Files
<input type="checkbox"/>	Casual speech processes: L1 knowledge and L2 speech perception	Tuinman, Annelie; Cutler, Anne	Proceedings Paper	2010, Published in Print	1 File
<input type="checkbox"/>	Learning minimally different words in a third language: L2 proficiency as a cru...	Simon, E.; Escudero, P.; Broersma, Mirjam	Proceedings Paper	2010, Published in Print	1 File
<input type="checkbox"/>	Dutch listener's perception of Korean fortis, lenis, and aspirated stops: First...	Broersma, Mirjam	Proceedings Paper	2010, Published in Print	1 File
<input type="checkbox"/>	Artificial language learning	Petersson, Karl Magnus; Forkstam, Christian; Inácio, Filomena; Bramão, Inês ...	Book Chapter	2010, Accepted	1 File
<input type="checkbox"/>	Effective connectivity of cortical and subcortical regions during unification o...	Snijders, Tineke; Petersson, Karl Magnus; Hagoort, Peter	Journal Article	2010, Published Online	1 File



Choose Browse By

Organizations

Description Browse by organizational unit names and view the corresponding items.

Persons

Description Browse by person names and view the corresponding items.

Subjects

[ddc](#) Dewey Decimal Classification

[mpipks](#) MPI PKS Classification

Year

Description Browse by year and view the corresponding items.



Go

Advanced Search

Organizations

 Include files

HOME BASKET (0)

VIEW SORT EXPORT ADD SELECTED TO BASKET

APA ▼
 EndNote (UTF-8)
 BibTeX
 eSciDoc XML
APA
 AJP
 25 ▼ go

PDF ▼
 PDF
 ODT
 RTF
 HTML
SNIPPET v5.x
 SNIPPET v6.x

Previous | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Next ▶▶

Go to page of 64 go

items per page

Home > Advanced Search > Search Results

Search Results

Title	Creator	Genre	Date	Files
<input checked="" type="checkbox"/> Casual speech processes: L1 knowledge and L2 speech perception	Tuinman, Annelie; Cutler, Anne	Proceedings Paper	2010, Published in Print	1 File
<input checked="" type="checkbox"/> Learning minimally different words in a third language: L2 proficiency as a cru...	Simon, E.; Escudero, P.; Broersma, Mirjam	Proceedings Paper	2010, Published in Print	1 File
<input checked="" type="checkbox"/> Dutch listener's perception of Korean fortis, lenis, and aspirated stops: First...	Broersma, Mirjam	Proceedings Paper	2010, Published in Print	1 File
<input checked="" type="checkbox"/> Artificial language learning	Petersson, Karl Magnus; Forkstam, Christian; Inácio, Filomena; Bramão, Inês ...	Book Chapter	2010, Accepted	1 File
<input checked="" type="checkbox"/> Effective connectivity of cortical and subcortical regions during unification o...	Snijders, Tineke; Petersson, Karl Magnus; Hagoort, Peter	Journal Article	2010, Published Online	1 File
<input checked="" type="checkbox"/> Automatic online writing support for L2 learners of German through output monit...	Harbusch, Karin; Kempen, Gerard	Book Chapter	2010, Accepted	1 File
<input checked="" type="checkbox"/> Correlation versus causation in multisensory perception	Mitterer, Holger; Jesse, Alexandra	Journal Article	2010-06-10, Published in Print	1 File
<input checked="" type="checkbox"/> Seeing a singer helps comprehension of the song's lyrics	Jesse, Alexandra; Massaro, D. W.	Journal Article	2010, Published in Print	1 File

CoNE Service – Integrated Management for Named Entities

hide File Locators

Persons & Organizations *Creator role - Add multiple

*Type Person Organization

*Family name Given name

bro

Brödel, Johannes (Quantum Gravity & Unified Theories, AEI-Golm, MPI for Gravitational Physics, Max Planck Society)
Broedel , Johannes (Quantum Gravity & Unified Theories, AEI-Golm, MPI for Gravitational Physics, Max Planck Society)
Broeder , Daan (Technical Group, MPI for Psycholinguistics, Max Planck Society)
Broersma , Mirjam (Language Comprehension Group, MPI for Psycholinguistics, Max Planck Society)
Brouwer , Susanne (Language Comprehension Group, MPI for Psycholinguistics, Max Planck Society)
Brown , Nina (Department of Biochemistry, Prof. J. Gershenzon, MPI for Chemical Ecology, Max Planck Society)
Brown , Paul (Department of Biochemistry, Prof. J. Gershenzon, MPI for Chemical Ecology, Max Planck Society)
Brown , Penelope (Language Acquisition Group, MPI for Psycholinguistics, Max Planck Society)
Brozinski , M. (MPI für Kulturpflanzenzüchtung, Max-Planck-Gesellschaft)
Dabrowska , Paulina (Department of Bioorganic Chemistry, Prof. Dr. W. Boland, MPI for Chemical Ecology, Max Planck Society)

hide Persons & Organization

Content Free keywords

CoNE Service – Integrated Management for Named Entities

hide File Locators

Persons & Organizations *Creator role - Add multiple

*Type Person Organization

*Family name
brd

Brödel, Johannes (Gu
Broedel, Johannes (G
Broeder, Daan (Techn
Broersma, Mirjam (Lar
Brouwer, Susanne (L
Brown, Nina (Departm
Brown, Paul (Departm
Brown, Penelope (Lar
Brozinski, M. (MPI für
Dabrowska, Paulina (

hide Persons & Organization

Content Free keywords

DDC Subject 03

Abstract

003 - Systems
 030 - General encyclopedic works
 031 - Encyclopedias in American English
 032 - Encyclopedias in English
 033 - Encyclopedias in other Germanic languages
 034 - Encyclopedias in French, Occitan & Catalan
 035 - Encyclopedias in Italian, Romanian & related languages
 036 - Encyclopedias in Spanish & Portuguese
 037 - Encyclopedias in Slavic languages
 038 - Encyclopedias in Scandinavian languages
 039 - Encyclopedias in other languages
 103 - Dictionaries & encyclopedias
 203 - Public worship & other practices
 303 - Social processes
 403 - Dictionaries & encyclopedias
 503 - Dictionaries & encyclopedias
 603 - Dictionaries & encyclopedias
 703 - Dictionaries of fine & decorative arts
 803 - Dictionaries & encyclopedias
 903 - Dictionaries & encyclopedias
 -

Date accepted
 Date created

CoNE Service – Integrated Management for Named Entities

hide File Locators

Persons & Organizations *Creator role - Add multiple

*Type Person Organization

*Family name
brd
Brödel, Johannes (Gu
Broedel, Johannes (G
Broeder, Daan (Techn
Broersma, Mirjam (L
Brouwer, Susanne (L
Brown, Nina (Departm
Brown, Peter (Departm

DDC Subject 03
Abstract
003 - Systems
030 - General encyclopedic works
031 - Encyclopedias in American English
032 - Encyclopedias in English
033 - Encyclopedias in other Germanic languages
034 - Encyclopedias in French, Occitan & Catalan
035 - Encyclopedias in Italian, Romanian & related languages

hide Content

Details Language of Publication sp
* Esperanto
Romansh
Spanish
Spanish; Castilian

Date published online
Date accepted
Date modified
Date created

703 - Dictionaries of fine & decorative arts
803 - Dictionaries & encyclopedias
903 - Dictionaries & encyclopedias

CoNE Service – Integrated Management for Named Entities

hide File Locators

Persons & Organizations *Creator role - Add multiple

*Type Person Organization

*Family name
brd
Brödel, Johannes (Gu
Broedel, Johannes (G
Broeder, Daan (Techn
Broersma, Mirjam (L
Brouwer, Susanne (L
Brown, Nina (Departm
Browne, Peter (Departm

DDC Subject 03
Abstract 003 - Systems
030 - General encyclopedic works
031 - Encyclopedias in American English
032 - Encyclopedias in English
033 - Encyclopedias in other Germanic languages
034 - Encyclopedias in French, Occitan & Catalan
035 - Encyclopedias in Italian, Romanian & related languages

hide Content

Details Language of Publication sp
* Esperanto
Romansh
Spanish

Genre Journal

Title information science

Author role
Acta Ornithologica; Published for the Smithsonian Institution and the National Science Foundation, Washington, D.C., by the Foreign Scientific Publications Dept. of the National Center for Scientific Technical, and Economic Information, Warsaw, Poland
Biosystems [Elektronische Ressource] : Journal of Biological and Information Processing Science; Elsevier, Ireland, etc.
Current Contents/Engineering Technology & Applied Sciences; Institute for Scientific Information., Philadelphia
Current Contents/Life Sciences; Institute for Scientific Information, Philadelphia, Pa.
Current Contents/Physical Chemical & Earth Sciences; Institute for Scientific Information, Philadelphia, Pa.
Drosophila Information Service; Division of Biological Sciences, University of Kansas [etc.], Lawrence, Kan. [etc.]
IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences - Series A; Institute of Electronics, Information and Communication Engineers, Tokyo, Japan
Indian Journal of Chemistry Section A-Inorganic Bio-Inorganic Physical Theoretical & Analytical Chemistry; Published by the Publications & Information Directorate, CSIR, in association with the Indian National Science Academy, New Delhi
Indian Journal of Engineering and Materials Science; Publications & Information Directorate, CSIR in association with Indian National Science Academy, New Delhi
Information Science; Elsevier, Amsterdam
Journal of Chemical Information and Computer Science; American Chemical Society., Washington
Journal of Computing and Information Science in Engineering; American Society of Mechanical Engineers, New York, NY
Plant Protection Science; Institute of Agricultural and Food Information, Prague
ScienceAsia; Public Information Dept., Thailand's National Science and Technology Development Agency, Bangkok, Thailand

Type

Source Volume

Total no. of pages



Researcher Portfolio

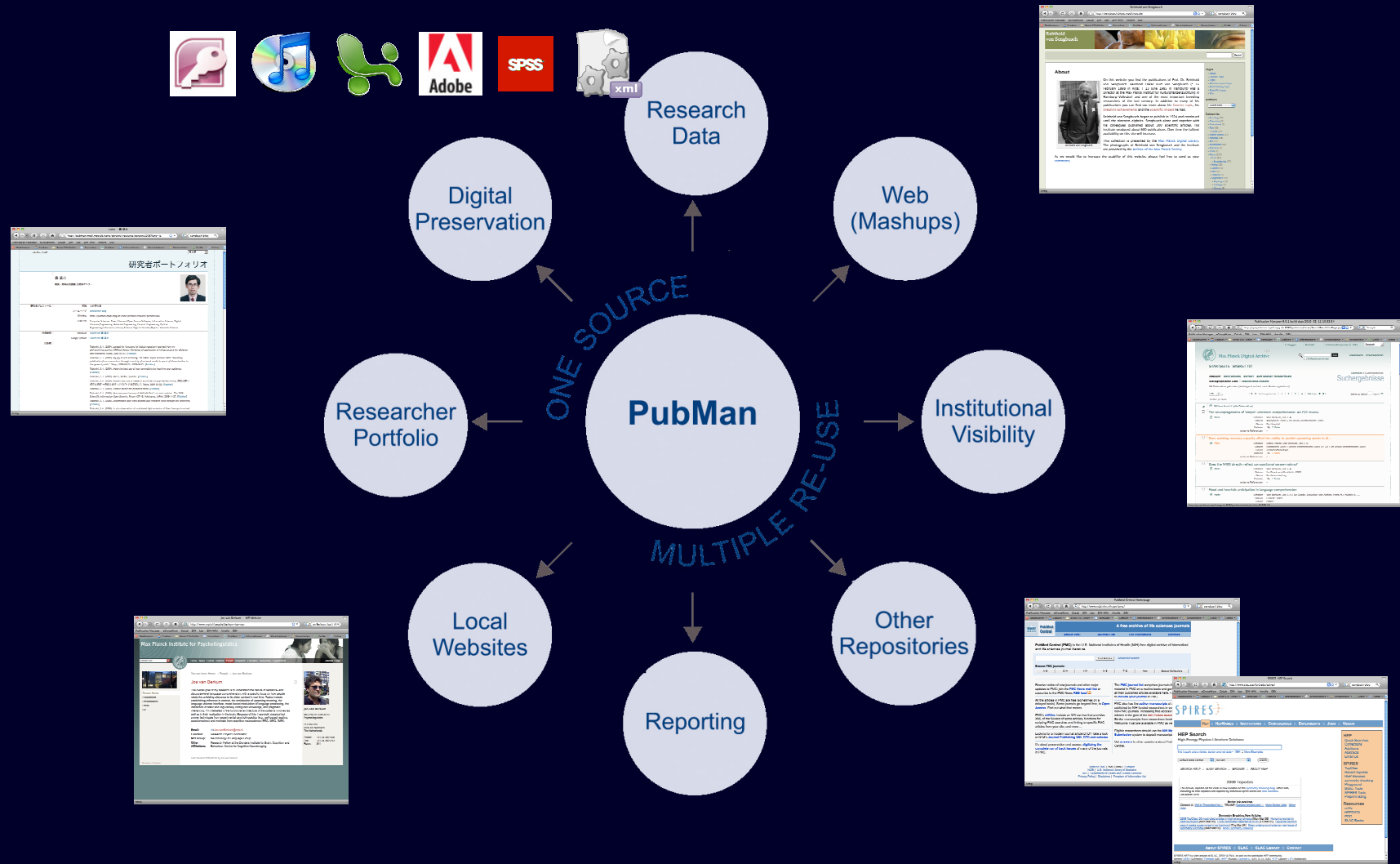
PhD Todoroki, Shin-ichi

Optronics Center, National Institute for Materials Science

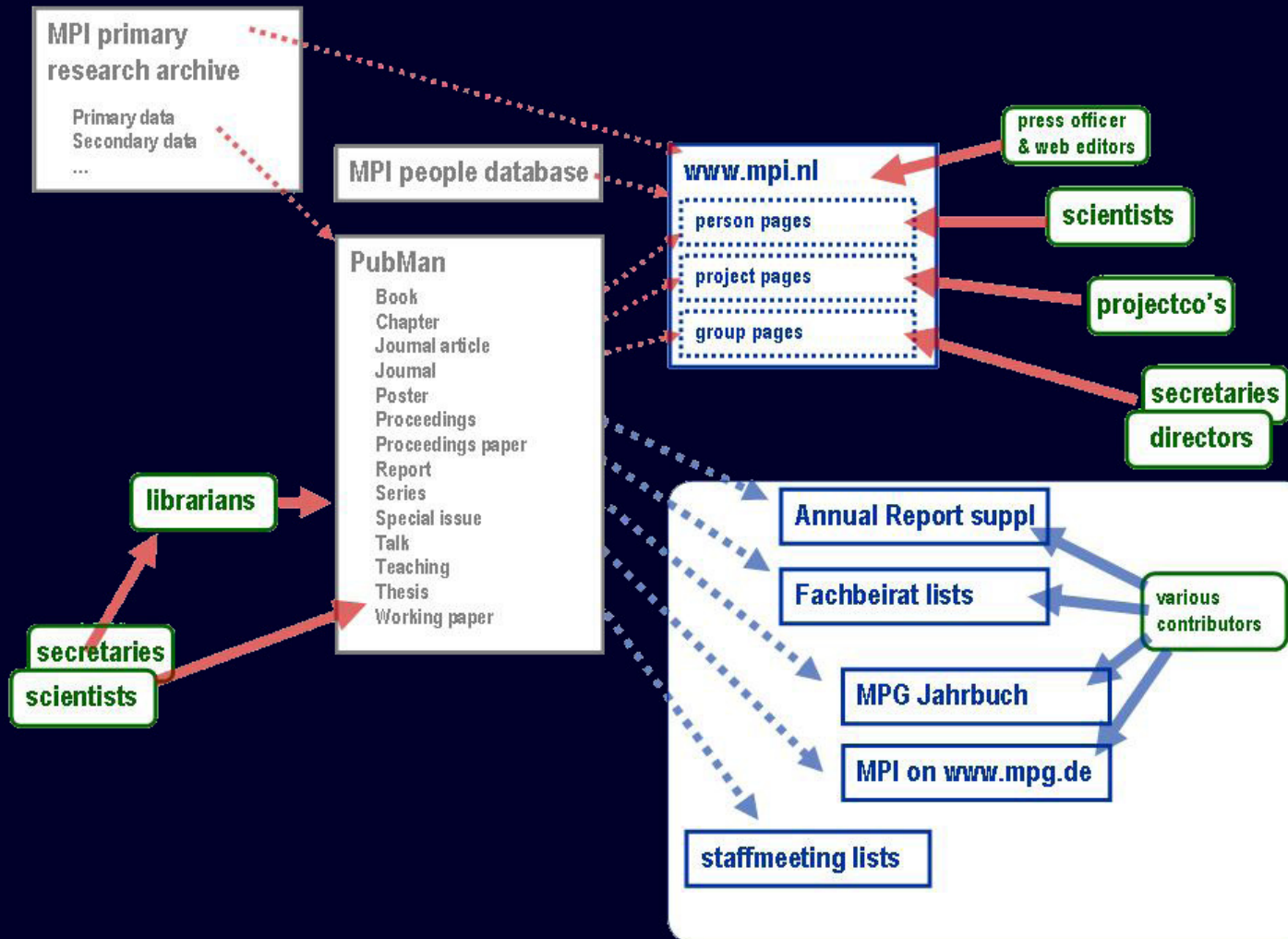



Researcher Profile	Current Position	Senior Researcher
	Researcher Homepage(s)	Researcher Blog
	Researcher ID	http://pubman.mpdl.mpg.de/cone/persons/resource/persons1008
	Research Fields	Computer Sciences: Free, Libre and Open Source Software; Information Science; Digital Libraries Engineering: Materials Engineering; Ceramic Engineering; Optical Engineering Informatics Library Science: Digital Libraries Physics: Materials Science
External references	WorldCat	Search for Todoroki, Shin-ichi
	Google Scholar	Search for Todoroki, Shin-ichi
Publications	<p>Todoroki, S.-i. (2009). Longed-for functions for digital repository learned from my self-archiving activity. <i>DRFtech-Kyoto: Workshop of application of Infrastructure for eScience and eResearch</i>. Kyoto, 2009-09-07. [PubMan]</p> <p>Todoroki, S.-i. (2009). My joy of self-archiving. <i>1st SPARC Japan seminar 2009: "Voluntary publication from researchers through a variety of network media in quest of dissemination to the general public"</i>. Tokyo, 2009-06-25 - 2009-06-25. [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Make the best use of your serendipity by inspiring your audience</i>. [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Merci, XieXie, Spasibo</i>. [PubMan]</p> <p>Todoroki, S.-i. (2009). Publish your joy of research activities through self-archiving. <i>研究成果の保存と発信 - 発信力を持つリポジトリを目指して</i>. Tokyo, 2009-03-02. [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Chance favors the prepared mind</i>. [PubMan]</p> <p>Todoroki, S.-i. (2008). How we pave the way of NIMS eSciDoc? --A user's opinion. <i>The 2008 Scientific Information Open Summit: Forum #27-18</i>. Yokohama, JAPAN, 2008-11-27. [PubMan]</p> <p>Todoroki, S.-i. (2008). <i>Disseminate your work beyond your research field through self-archiving</i>. [PubMan]</p> <p>Todoroki, S.-i. (2008). In situ observation of modulated light emission of fiber fuse synchronized with void train over hetero-core splice point. <i>PLoS ONE</i>, 3(9), e3276. doi:10.1371/journal.pone.0003276. [PubMan]</p> <p>Todoroki, S.-i. (2008). Manuscript writing support system for researchers based on hypertext list of their achievements. <i>Ceramics Japan</i>, 42(7), 520-524. [PubMan]</p> <p>Todoroki, S.-i. (2007). <i>Two serendipitous episodes -- How I embarked on fiber fuse research</i>. [PubMan]</p> <p>Todoroki, S.-i. (2006). Heat-induced breakage of an optical circuit at a TeO₂ glass bridge linking silica glass fibers. <i>J. Ceram. Soc. Jpn.</i>, 114(8), 709-712. [PubMan]</p> <p>Todoroki, S.-i. (2006). In-Situ Observation of Fiber-Fuse Propagation. <i>Jpn. J. Appl. Phys.</i>, 44(6A), 4022-4024. [PubMan]</p>	

One Source – Multiple Re-Use Options



The Integration of PubMan Data into Local Websites





[Advanced Search](#) [Organizations](#)

HOME MY ITEMS QA WORKSPACE SUBMISSION BASKET (0)

ITEM ACTIONS EXPORT Advanced Search > Search Results > View Item

[Create new revision](#) | [Use item as template](#) | [Add to Basket](#)


View item

[View item](#) | [Release History](#) | [Revisions](#) | [Item Statistics](#) | [Local Tags](#)

Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity  Released

Contact [Moderator](#)

Basic

Bookmark this item <http://pubman.mpg.de/pubman/item/escidoc:60136:8> 

Genre Journal Article

Files

Name	suppl1.pdf (Supplementary material)
Description	-
Visibility	Public
MIME-Type / Size	application/pdf / 72KB
Copyright Date	-
Copyright Info	-
License	-
Name	suppl2_dutch_stimulus.pdf (Supplementary material)
Description	-
Visibility	Public
MIME-Type / Size	application/pdf / 27KB
Copyright Date	-
Copyright Info	-
License	-



Search Site



Home News Events Institute **People** Research Education Resources Experiments

Sitemap | Login

HOM

ITEM A

Create



Person Home

Publications

Presentations

Press

CV

You are here: Home → People → Jos van Berkum → Publications

Jos van Berkum - Publications



Jos van Berkum

Max Planck Institute for
Psycholinguistics

PO Box 310
6500 AH Nijmegen
The Netherlands

Phone: +31-24-3521309
Fax: +31-24-3521213
Room: 341

in press

- Ringersma, J., Kastens, K., Tschida, U., & Van Berkum, J. J. A. (in press). A principled approach to online publication listings and scientific resource sharing. Code4Lib. [more >](#)
- Van Berkum, J. J. A. (in press). The electrophysiology of discourse and conversation. In M. Spivey, K. McRae, & M. Joanisse (Eds.), *The Cambridge handbook of psycholinguistics*. Cambridge: Cambridge University Press. [more >](#)

2009

- Otten, M., & Van Berkum, J. J. A. (2009). Does working memory capacity affect the ability to predict upcoming words in discourse? *Brain Research*, 1291, 92-101. [more >](#)
- Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503. [more >](#)
- Tesink, C. M. J. Y., Petersson, K. M., Van Berkum, J. J. A., Van den Brink, D., Buitelaar, J. K., & Hagoort, P. (2009). Unification of speaker and meaning in language comprehension: An fMRI study. *Journal of Cognitive Neuroscience*, 21, 2085-2099. [more >](#)
- Van Alphen, P. M., & Van Berkum, J. J. A. (2009). Is there pain in champagne? Semantic involvement of words within words during sense-making. *Journal of Cognitive Neuroscience*. doi:10.1162/jocn.2009.21336. [more >](#)



Search Site



Home News Events Institute **People** Research Education Resources Experiments

Sitemap | Login

HOM

ITEM A

Create



Person Home

Publications

Presentations

Press

CV

You are here: Home → People → Jos van Berkum → Publications

Jos van Berkum - Publications



Jos van Berkum

Max Planck Institute for Psycholinguistics

PO Box 310
6500 AH Nijmegen
The Netherlands

Phone: +31-24-3521309
Fax: +31-24-3521213
Room: 341

in press

- Ringersma, J., Kastens, K., Tschida, U., & Van Berkum, J. J. A. (in press). A principled approach to online publication listings and scientific resource sharing. Code4Lib. [more >](#)
- Van Berkum, J. J. A. (in press). The electrophysiology of discourse and conversation. In M. Spivey, K. McRae, & M. Joanisse (Eds.), *The Cambridge handbook of psycholinguistics*. Cambridge: Cambridge University Press. [more >](#)

2009

- Otten, M., & Van Berkum, J. J. A. (2009). Does working memory capacity affect the ability to predict upcoming words in discourse? *Brain Research*, 1291, 92-101. [more >](#)
- Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word category ambiguity. *Cerebral Cortex*, 19, 1493-1503. [more >](#)
- Tesink, C. M. J. Y., Petersson, K. M., Van Berkum, J. J. A., Van den Brink, D., Buitelaar, J. K., & Hagoort, P. (2009). Unification of speaker and meaning in language comprehension: An fMRI study. *Journal of Cognitive Neuroscience*, 21, 2085-2099. [more >](#)
- Van Alphen, P. M., & Van Berkum, J. J. A. (2009). Is there pain in champagne? Semantic involvement of words within words during sense-making. *Journal of Cognitive Neuroscience*. doi:10.1162/jocn.2009.21336. [more >](#)



Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503.

Sentence comprehension requires the retrieval of single word information from long-term memory, and the integration of this information into multiword representations. The current functional magnetic resonance imaging study explored the hypothesis that the left posterior temporal gyrus supports the retrieval of lexical-syntactic information, whereas left inferior frontal gyrus (LIFG) contributes to syntactic unification. Twenty-eight subjects read sentences and word sequences containing word-category (noun-verb) ambiguous words at critical positions. Regions contributing to the syntactic unification process should show enhanced activation for sentences compared to words, and only within sentences display a larger signal for ambiguous than unambiguous conditions. The posterior LIFG showed exactly this predicted pattern, confirming our hypothesis that LIFG contributes to syntactic unification. The left posterior middle temporal gyrus was activated more for ambiguous than unambiguous conditions (main effect over both sentences and word sequences), as predicted for regions subserving the retrieval of lexical-syntactic information from memory. We conclude that understanding language involves the dynamic interplay between left inferior frontal and left posterior temporal regions.

[Link to source \(DOI\) >](#)
[Downloadable fulltext >](#)

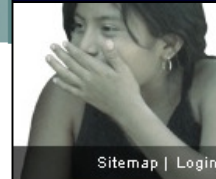
Supplementary materials

[suppl1.pdf](#)
[suppl2_dutch_stimulus.pdf](#)

close window 

2009

- Otten, M., & Van Berkum, J. J. A. (2009). Does working memory capacity affect the ability to predict upcoming words in discourse? *Brain Research*, 1291, 92-101. [more >](#)
- Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503. [more >](#)
- Tesink, C. M. J. Y., Petersson, K. M., Van Berkum, J. J. A., Van den Brink, D., Buitelaar, J. K., & Hagoort, P. (2009). Unification of speaker and meaning in language comprehension: An fMRI study. *Journal of Cognitive Neuroscience*, 21, 2085-2099. [more >](#)
- Van Alphen, P. M., & Van Berkum, J. J. A. (2009). Is there pain in champagne? Semantic involvement of words within words during sense-making. *Journal of Cognitive Neuroscience*. doi:10.1162/jocn.2009.21336. [more >](#)



Van Berkum

Max Planck Institute for
Psychological Linguistics

310
Nijmegen
The Netherlands

Phone: +31-24-3521309
Fax: +31-24-3521213
Room: 341



Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503.

Sentence comprehension requires the retrieval of single word information from long-term memory, and the integration of this information into multiword representations. The current functional magnetic resonance imaging study explored the hypothesis that the left posterior temporal gyrus supports the retrieval of lexical-syntactic information, whereas left inferior frontal gyrus (LIFG) contributes to syntactic unification. Twenty-eight subjects read sentences and word sequences containing word-category (noun-verb) ambiguous words at critical positions. Regions contributing to the syntactic unification process should show enhanced activation for sentences compared to words, and only within sentences display a larger signal for ambiguous than unambiguous conditions. The posterior LIFG showed exactly this predicted pattern, confirming our hypothesis that LIFG contributes to syntactic unification. The left posterior middle temporal gyrus was activated more for ambiguous than unambiguous conditions (main effect over both sentences and word sequences), as predicted for regions subserving the retrieval of lexical-syntactic information from memory. We conclude that understanding language involves the dynamic interplay between left inferior frontal and left posterior temporal regions.

[Link to source \(DOI\) >](#)
[Downloadable fulltext >](#)

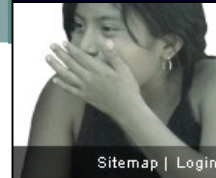
Supplementary materials

[suppl1.pdf](#)
[suppl2_dutch_stimulus.pdf](#)

close window

2009

- Otten, M., & Van Berkum, J. J. A. (2009). Does working memory capacity affect the ability to predict upcoming words in discourse? *Brain Research*, 1291, 92-101. [more >](#)
- Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503. [more >](#)
- Tesink, C. M. J. Y., Petersson, K. M., Van Berkum, J. J. A., Van den Brink, D., Buitelaar, J. K., & Hagoort, P. (2009). Unification of speaker and meaning in language comprehension: An fMRI study. *Journal of Cognitive Neuroscience*, 21, 2085-2099. [more >](#)
- Van Alphen, P. M., & Van Berkum, J. J. A. (2009). Is there pain in champagne? Semantic involvement of words within words during sense-making. *Journal of Cognitive Neuroscience*. doi:10.1162/jocn.2009.21336. [more >](#)



[Sitemap](#) | [Login](#)



Van Berkum

Max Planck Institute for
Psychological Linguistics

310
Nijmegen

The Netherlands

Phone: +31-24-3521309
Fax: +31-24-3521213
Room: 341



Person Home

Publications

Presentations

Press

CV

Journal article

Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503.

Sentence comprehension requires the retrieval of single word information from long-term memory, and the integration of this information into multiword representations. The current functional magnetic resonance imaging study explored the hypothesis that the left posterior temporal gyrus supports the retrieval of lexical-syntactic information, whereas left inferior frontal gyrus (LIFG) contributes to syntactic unification. Twenty-eight subjects read sentences and word sequences containing word-category (noun-verb) ambiguous words at critical positions. Regions contributing to the syntactic unification process should show enhanced activation for sentences compared to words, and only within sentences display a larger signal for ambiguous than unambiguous conditions. The posterior LIFG showed exactly this predicted pattern, confirming our hypothesis that LIFG contributes to syntactic unification. The left posterior middle temporal gyrus was activated more for ambiguous than unambiguous conditions (main effect over both sentences and word sequences), as predicted for regions subserving the retrieval of lexical-syntactic information from memory. We conclude that understanding language involves the dynamic interplay between left inferior frontal and left posterior temporal regions.

[Link to source \(DOI\) >](#)
[Downloadable fulltext >](#)

Supplementary materials

[suppl1.pdf](#)
[suppl2_dutch_stimulus.pdf](#)

2009

- Otten, M., & Van Berkum, J. J. A. (2009). Does working memory capacity affect the ability to predict upcoming words in discourse? *Brain Research*, 1291, 92-101. [more >](#)
- Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503. [more >](#)
- Tesink, C. M. J. Y., Petersson, K. M., Van Berkum, J. J. A., Van den Brink, D., Buitelaar, J. K., & Hagoort, P. (2009). Unification of speaker and meaning in language comprehension: An fMRI study. *Journal of Cognitive Neuroscience*, 21, 2085-2099. [more >](#)
- Van Alphen, P. M., & Van Berkum, J. J. A. (2009). Is there pain in champagne? Semantic involvement of words within words during sense-making. *Journal of Cognitive Neuroscience*. doi:10.1162/jocn.2009.21336. [more >](#)

close window

Psychology of Language
Nijmegen

The Netherlands

Phone: +31-24-3521309
Fax: +31-24-3521213
Room: 341

Cerebral Cortex July 2009 | 19: 1493-1503
doi:10.1162/jocn.2009.21336
© 2009 Society for Neuroscience 0898-9290/09/191493-12\$15.00/0

FEATURE ARTICLE
Retrieval and Unification of Syntactic Structure in Sentence Comprehension: an fMRI Study Using Word-Category Ambiguity

Tincko M. Snijders¹, Theo Vosse^{1,2}, Gerard Kempen^{1,3}, Jos JA Van Berkum^{1,3}, Karl Magnus Petersson^{1,3} and Peter Hagoort^{1,3}

¹IC, Donders Centre for Cognitive Neuroimaging, 6500 HB Nijmegen, the Netherlands, ²Cognitive Psychology Unit, Leiden University, 2311 EZ Leiden, the Netherlands and ³Max Planck Institute for Psycholinguistics, 0525 3D Nijmegen, the Netherlands

Sentence comprehension requires the retrieval of single word information from long-term memory, and the integration of this information into multiword representations. The current functional magnetic resonance imaging study explored the hypothesis that the left posterior temporal gyrus supports the retrieval of lexical-syntactic information, whereas left inferior frontal gyrus (LIFG) contributes to syntactic unification. Twenty-eight subjects read sentences and word sequences containing word-category (noun-verb) ambiguous words at critical positions. Regions contributing to the syntactic unification process should show enhanced activation for sentences compared to words, and only within sentences display a larger signal for ambiguous than unambiguous conditions. The posterior LIFG showed exactly this predicted pattern, confirming our hypothesis that LIFG contributes to syntactic unification. The left posterior middle temporal gyrus was activated more for ambiguous than unambiguous conditions (main effect over both sentences and word sequences), as predicted for regions subserving the retrieval of lexical-syntactic information from memory. We conclude that understanding language involves the dynamic interplay between left inferior frontal and left posterior temporal regions.

Keywords: integration, left inferior frontal gyrus, lexicon retrieval, parsing, temporal lobe.

Introduction

We hear and use thousands of words each day, and effortlessly interpret them in their context. To achieve this, several intricate processes are engaged by the brain. Whenever model of language comprehension one adheres to, all make the general distinction between retrieval and integration processes. Retrieval entails selecting the lexical representation of a word from memory. Information we have learned about single words has been laid down in long-term memory, in what psycholinguists usually call the "mental lexicon" (e.g., Levelt, 1982). This information includes a word's form, its syntactic properties (e.g., word class, gender), and the meaning of a lexical item. In order to understand single words we have to map the input signal onto word form representations in the mental lexicon (Gee) and select the corresponding lexical representation (Marslen-Wilson, 1987). In this way the information associated with the word form is retrieved. However, what makes language useful and creative is that words occur in all sorts of different contexts, with the varying combinations of words allowing for an infinite number of higher-level representations (van Ham- buldt, 1886). This process of combining the retrieved single word information into higher-level representations, has been called "integration" or "unification" (Marslen-Wilson, 1987;

Hagoort et al., 1999; Sag and Wasow, 1999; Kempen and Harbech, 2002). Both memory and unification processes occur in parallel at the semantic (conceptual) and at the syntactic (structural) level (Jackendoff, 2002). The current functional magnetic resonance imaging (fMRI) study focuses on the syntactic level. We aim to disentangle the syntactic retrieval and unification processes and identify their respective neural correlates.

Computational Model

Recently, in linguistic theories the separation between lexical items and traditional rules of grammar is fading. Increasing support has been found for lexical parsing models (MacDonald et al., 1994; Joshi and Schabes, 1997; Jackendoff, 2002). In lexicalist models syntactic properties of words needed for integration are retrieved from the lexicon (from memory) and the only remaining "rule" is unification (Jackendoff, 2002). A lexicalist model that is computationally explicit is the Unification Space Model of parsing by Vosse and Kempen (2009). This model accounts for a large series of empirical findings in the parsing literature and in the neuropsychological literature on aphasia. According to the Unification Space Model, every incoming word retrieves one or more lexical frames from the "mental lexicon". These lexical frames are elementary syntactic trees, specifying the possible structural environment of the particular input word, see Figure 1 for examples of lexical frames for a noun ("higher") and a verb ("be"). This parsing account is "lexicalist" in the sense that all syntactic information associated with a lexical item is retrieved from the mental lexicon rather than being supplied by grammatical rules (Vosse and Kempen, 2009). For a similar account, see Collobert and Jackendoff (2005).

Lexical frames that are retrieved from memory will enter the Unification Space in a sequential fashion, as new words arrive as input. Then, in Unification Space binding operations between lexical frames are performed, resulting in an incremental structural interpretation of the sentence. During the unification process lexical frames are linked, and agreement features (number, gender, person, etc.) and word order constraints are applied. Unification links are dynamic, that is, the strength of the unification links varies over time until one stable phrasal configuration results. As language is intrinsically ambiguous, often several different unification possibilities exist. In the Unification Space model, selection among alternative unification links occurs via lateral inhibition (Vosse and Kempen, 2009; see Thompson-Schill, 2005 on selection).

Brain Regions

With the Unification Space Model as our theoretical framework, can we identify distinct neural systems subserving

© The Author 2009. Published by Oxford University Press. All rights reserved. No permissions, please e-mail: journals.permissions@oxfordjournals.org



Journal article

Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503.

Sentence comprehension requires the retrieval of single word information from long-term memory, and the integration of this information into multiword representations. The current functional magnetic resonance imaging study explored the hypothesis that the left posterior temporal gyrus supports the retrieval of lexical-syntactic information, whereas left inferior frontal gyrus (LIFG) contributes to syntactic unification. Twenty-eight subjects read sentences and word sequences containing word-category (noun-verb) ambiguous words at critical positions. Regions contributing to the syntactic unification process should show enhanced activation for sentences compared to words, and only within sentences display a larger signal for ambiguous than unambiguous conditions. The posterior LIFG showed exactly this predicted pattern, confirming our hypothesis that LIFG contributes to syntactic unification. The left posterior middle temporal gyrus was activated more for ambiguous than unambiguous conditions (main effect over both sentences and word sequences), as predicted for regions subserving the retrieval of lexical-syntactic information from memory. We conclude that understanding language involves the dynamic interplay between left inferior frontal and left posterior temporal regions.

[Link to source \(DOI\) >](#)
[Downloadable fulltext >](#)

Supplementary materials
[suppl1.pdf](#)
[suppl2_dutch_stimulus.pdf](#)

Journal article

Feature Article
Retrieval and Unification of Syntactic Structure in Sentence Comprehension: an fMRI Study Using Word-Category Ambiguity

Tinckneel, M., Snijders, T., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P.

19C, Donders Centre for Cognitive Neuroimaging, 6500 HB Nijmegen, the Netherlands; Cognitive Psychology Unit, Leiden University, 2311 EZ Leiden, the Netherlands and Max Planck Institute for Psycholinguistics, 0525 XD Nijmegen, the Netherlands

2009

Sentence comprehension requires the retrieval of single word information from long-term memory, and the integration of this information into multiword representations. The current functional magnetic resonance imaging study explored the hypothesis that the left posterior temporal gyrus supports the retrieval of lexical-syntactic information, whereas left inferior frontal gyrus (LIFG) contributes to syntactic unification. Twenty-eight subjects read sentences and word sequences containing word-category (noun-verb) ambiguous words at critical positions. Regions contributing to the syntactic unification process should show enhanced activation for sentences compared to words, and only within sentences display a larger signal for ambiguous than unambiguous conditions. The posterior LIFG showed exactly this predicted pattern, confirming our hypothesis that LIFG contributes to syntactic unification. The left posterior middle temporal gyrus was activated more for ambiguous than unambiguous conditions (main effect over both sentences and word sequences), as predicted for regions subserving the retrieval of lexical-syntactic information from memory. We conclude that understanding language involves the dynamic interplay between left inferior frontal and left posterior temporal regions.

Keywords: integration, left inferior frontal gyrus, lexical retrieval, parsing, temporal lobe.

Introduction
We hear and use thousands of words each day, and effortlessly interpret them in their context. To achieve this, several intricate processes are engaged by the brain. Whenever model of language comprehension one adheres to, all make the general distinction between retrieval and integration processes. Historical studies seeking the lexical representation of a word from memory. Information we have learned about single words has been laid down in long-term memory; in what psycholinguists usually call the "mental lexicon" (e.g., Levelt 1982). This information includes a word's form, its syntactic properties (e.g., word class, gender), and the meaning of a lexical item. In order to understand single words we have to map the input signal onto word form representations in the mental lexicon. (Gardner and select the corresponding lexical representation (Marslen-Wilson 1987). In this way the information associated with the word form is retrieved. However, what makes language useful and creative is that words occur in all sorts of different contexts, with the varying combinations of words allowing for an infinite number of higher-level representations (van Haterik 1986). This process of combining the retrieved single word information into higher-level representations, has been called "integration" or "unification" (Marslen-Wilson 1987; Hagoort et al. 1999; Sag and Wasow 1999; Kempen and Harizan 2002). Both memory and unification processes occur in parallel at the semantic (conceptual) and at the syntactic (structural) level (Jackendoff 2002). The current functional magnetic resonance imaging (fMRI) study focuses on the syntactic level. We aim to disentangle the syntactic retrieval and unification processes and identify their respective neural correlates.

Computational Model
Recently, an linguistic theories the separation between lexical items and traditional rules of grammar is fading. Increasing support has been found for lexical parsing models (McClelland et al., 1994; Joshi and Schabas 1997; Jackendoff 2002). In lexicalist models syntactic properties of words needed for integration are retrieved from the lexicon (from memory), and the only remaining "rule" is unification (Jackendoff 2002). A lexicalist model that is computationally explicit is the Unification Space Model of parsing by Vosse and Kempen (2000). This model accounts for a large series of empirical findings in the parsing literature and in the neurophysiological literature on aphasia. According to the Unification Space Model, every incoming word introduces one or more lexical frames from the "mental lexicon". These lexical frames are elementary syntactic trees, specifying the possible structural environment of the particular input word. For Figure 1, for example, of lexical frames for a noun ("higher") and a verb ("the"). This parsing account is "lexicalist" in the sense that all syntactic information associated with a lexical item is retrieved from the mental lexicon rather than being supplied by grammatical rules (Vosse and Kempen 2000). For a similar account, see Collobert and Jackendoff (2005).

Lexical frames that are retrieved from memory will enter the Unification Space in a sequential fashion, as new words arrive at input. Thus, in Unification Space handling operations between lexical frames are performed, resulting in an incremental structural interpretation of the sentence. During the unification process lexical frames are linked, and agreement features (number, gender, person, etc.) and word order constraints are applied. Unification links are dynamic, that is, the strength of the Unification Space model, selection among alternative unification links occurs via lateral inhibition (Vosse and Kempen 2000; see Thompson-Schill 2005 on selection).

Brain Regions
With the Unification Space Model as our theoretical framework, we can identify distinct neural systems subserving

2009

- Otten, M., & Van Berkum, J. J. A. (2009). Does working memory capacity affect the ability to predict upcoming words in discourse? *Brain Research* 1291, 92-101. [more >](#)
- Snijders, T. M., Vosse, T., Kempen, G., Van Berkum, J. J. A., Petersson, K. M., & Hagoort, P. (2009). Retrieval and unification of syntactic structure in sentence comprehension: An fMRI study using word-category ambiguity. *Cerebral Cortex*, 19, 1493-1503. [more >](#)
- Tesink, C. M. J. Y., Petersson, K. M., Van Berkum, J. J. A., Van den Bosch, D., Butelaaar, J. K., & Hagoort, P. (2009). Unification of speaker and message in language comprehension: An fMRI study. *Journal of Cognitive Neuroscience* 21, 2085-2099. [more >](#)
- Van Alphen, P. M., & Van Berkum, J. J. A. (2009). Is there pain in champagne? Semantic involvement of words within words during sense making. *Journal of Cognitive Neuroscience*. doi:10.1162/jocn.2009.213. [more >](#)

Microsoft Excel spreadsheet showing data for 'Happy Faces Perceived Age'.

Picture Labels	Face Set	All Faces		Young Female Faces		Young Male Faces	
		Mean Perceived Age	SD Perceived Age	Mean Perceived Age	SD Perceived Age	Mean Perceived Age	SD Perceived Age
7 Young Female Faces	a	29.7	4.02	29.3	3.29	29.2	3.60
8 10 Young Female Faces	b	30.0	4.12	29.2	4.32	28.2	4.75
10 Young Female Faces	a	29.4	3.80	29.2	3.80	28.3	3.23
11 10 Young Female Faces	b	29.2	4.08	29.6	4.37	28.2	2.93
12 10 Young Female Faces	a	29.4	3.78	29.4	4.44	29.4	4.44
13 10 Young Female Faces	b	29.7	3.78	29.7	3.75	27.5	2.98
14 10 Young Female Faces	a	29.3	4.01	29.6	3.49	27.4	2.38
15 10 Young Female Faces	b	27.7	3.04	29.2	3.86	28.9	3.29
16 10 Young Female Faces	a	28.4	4.07	29.7	3.31	28.5	2.77
17 10 Young Female Faces	b	26.0	2.97	29.8	3.87	28.4	3.84
18 10 Young Female Faces	a	28.4	4.42	29.6	3.70	29.0	3.11
19 10 Young Female Faces	b	28.1	4.45	29.1	4.63	29.0	4.24
20 10 Young Female Faces	a	27.3	3.17	28.9	2.97	28.6	4.09
21 10 Young Female Faces	b	28.1	4.00	28.2	3.80	28.6	3.96
22 10 Young Female Faces	a	29.6	5.03	29.3	4.97	28.9	5.32
23 10 Young Female Faces	b	29.7	4.97	29.9	3.93	28.9	3.50
24 10 Young Female Faces	a	29.9	5.61	29.6	6.43	28.1	4.48
25 10 Young Female Faces	b	30.2	5.77	30.0	3.74	30.0	3.28
26 10 Young Female Faces	a	28.9	4.38	29.7	4.80	27.7	2.78
27 10 Young Female Faces	b	27.9	5.14	28.9	3.30	27.2	4.67
28 10 Young Female Faces	a	26.0	3.92	28.2	3.81	28.2	4.46
29 10 Young Female Faces	b	27.2	4.78	28.4	4.67	27.3	3.33
30 10 Young Female Faces	a	28.1	4.68	31.1	4.15	28.6	4.45
31 10 Young Female Faces	b	30.0	6.41	34.1	3.21	30.6	4.99
32 10 Young Female Faces	a	29.8	4.99	29.9	4.99	29.9	3.18
33 10 Young Female Faces	b	29.6	4.78	29.3	4.42	29.9	3.29
34 10 Young Female Faces	a	29.1	4.98	29.8	3.98	29.9	3.02
35 10 Young Female Faces	b	28.0	4.72	30.1	2.98	28.7	2.01
36 10 Young Female Faces	a	27.7	4.38	28.9	3.03	28.0	3.39
37 10 Young Female Faces	b	28.3	4.09	28.1	2.91	28.6	2.26
38 10 Young Female Faces	a	28.1	4.57	28.1	3.27	28.2	2.73
39 10 Young Female Faces	b	28.3	3.73	29.2	3.24	28.7	2.28
40 10 Young Female Faces	a	28.5	4.04	29.4	4.10	29.4	2.79
41 10 Young Female Faces	b	28.0	5.06	19.9	4.84	22.0	3.30
42 10 Young Female Faces	a	29.1	4.63	29.1	6.25	29.1	4.10
43 10 Young Female Faces	b	29.0	5.31	29.5	3.96	29.4	2.24
44 10 Young Female Faces	a	28.1	6.06	34.1	6.81	29.1	4.45
45 10 Young Female Faces	b	30.0	10.14	29.3	6.21	29.3	3.86
46 10 Young Female Faces	a	28.4	6.71	30.0	5.93	28.0	3.38
47 10 Young Female Faces	b	28.4	4.42	30.8	2.24	29.3	4.07

The Integration of PubMan Data into Wordpress Blogs

Researcher Portfolio

<p>PhD Todoroki, Shin-ichi <small>Optronic Materials Center, National Institute for Materials Science</small></p> 	
Researcher Profile	<p>Current Position: Senior Researcher</p> <p>Researcher Homepage(s): Researcher Blog</p> <p>Researcher ID: http://pubman.mpd.mpg.de/cone/persons/resource/persons1008</p> <p>Research Fields: Computer Sciences: Free, Libre and Open Source Software; Information Science; Digital Libraries Engineering: Materials Engineering; Ceramic Engineering; Optical Engineering Informatics Library Science: Digital Libraries Physics: Materials Science</p>
External references	<p>WorldCat: Search for Todoroki, Shin-ichi</p> <p>Google Scholar: Search for Todoroki, Shin-ichi</p>
Publications	<p>Todoroki, S.-i. (2009). Longed-for functions for digital repository learned from my self-archiving activity. <i>DRFtech-Kyoto: Workshop of application of Infrastructure for eScience and eResearch</i>. Kyoto, 2009-09-07. [PubMan]</p> <p>Todoroki, S.-i. (2009). My joy of self-archiving. <i>1st SPARC Japan seminar 2009: "Voluntary publication from researchers through a variety of network media in quest of dissemination to the general public"</i>. Tokyo, 2009-06-25 - 2009-06-25. [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Make the best use of your serendipity by inspiring your audience.</i> [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Merci, XteXe, Spazio.</i> [PubMan]</p> <p>Todoroki, S.-i. (2009). Publish your joy of research activities through self-archiving. <i>研究成果の保存と発信 - 発信力を増強するウェブサイトの活用</i>. Tokyo, 2009-03-02. [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Chance favors the prepared mind.</i> [PubMan]</p> <p>Todoroki, S.-i. (2008). How we pave the way of NIMS eSciDoo? --A user's opinion. <i>The 2008 Scientific Information Open Summit: Forum #27-18</i>. Yokohama, JAPAN, 2008-11-27. [PubMan]</p> <p>Todoroki, S.-i. (2008). <i>Disseminate your work beyond your research field through self-archiving.</i> [PubMan]</p> <p>Todoroki, S.-i. (2008). In situ observation of modulated light emission of fiber fuse synchronized with void train over hetero-core splice point. <i>PLoS ONE</i>, 3(9), e3276. doi:10.1371/journal.pone.0003276. [PubMan]</p> <p>Todoroki, S.-i. (2008). Manuscript writing support system for researchers based on hypertext list of their achievements. <i>Ceramics Japan</i>, 42(7), 520-524. [PubMan]</p> <p>Todoroki, S.-i. (2007). <i>Two serendipitous episodes -- How I embarked on fiber fuse research.</i> [PubMan]</p> <p>Todoroki, S.-i. (2006). Heat-induced breakage of an optical circuit at a TeO₂ glass bridge linking silica glass fibers. <i>J. Ceram. Soc. Jpn.</i>, 114(8), 709-712. [PubMan]</p> <p>Todoroki, S.-i. (2006). In-Situ Observation of Fiber-Fuse Propagation. <i>Jpn. J. Appl. Phys.</i>, 44(6A), 4022-4024. [PubMan]</p>

Rese

PhD Todoroki, Shin-ichi

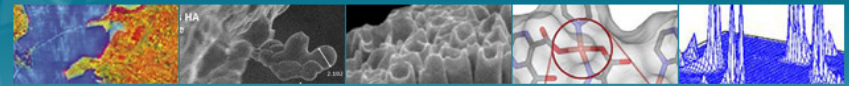
Optronic Materials Center, National Institute for Materials Science

Researcher Profile	Current Position	Senior Researcher
	Researcher Homepage(s)	Researcher Blog
External references	WorldCat	Search for Todoroki, Shin-ichi
	Google Scholar	Search for Todoroki, Shin-ichi

Publications	Todoroki, S.-i. (2009). <i>Beyond Institutional Repositories for digital repository and self-archiving activity. DRFtech-Kyoto: Workshop of application of Info and eResearch</i> . Kyoto, 2009-09-07. [PubMan]
	Todoroki, S.-i. (2009). <i>My joy of self-archiving. 1st SPARC Japan seminar publication from researchers through a variety of network media in the general public</i> . Tokyo, 2009-06-25 - 2009-06-25. [PubMan]
	Todoroki, S.-i. (2009). <i>Make the best use of your serendipity by inspiration</i> . [PubMan]
	Todoroki, S.-i. (2009). <i>Merci, XTeXe, Spazio</i> . [PubMan]
	Todoroki, S.-i. (2009). <i>Publish your joy of research activities through the preservation and dissemination of research results</i> . Tokyo, 2009-03-02. [PubMan]
	Todoroki, S.-i. (2009). <i>Chance favors the prepared mind</i> . [PubMan]
	Todoroki, S.-i. (2008). <i>How we pave the way of NIMS eSciDoo? -A user's perspective</i> . <i>Scientific Information Open Summit: Forum #27-18</i> . Yokohama, JAPAN, 2008-03-02. [PubMan]
	Todoroki, S.-i. (2008). <i>Disseminate your work beyond your research field through self-archiving</i> . [PubMan]
	Todoroki, S.-i. (2008). <i>In situ observation of modulated light emission from a void train over hetero-core splice point</i> . <i>PLoS ONE</i> , 3(9), e3276. doi:10.1371/journal.pone.0003276. [PubMan]
	Todoroki, S.-i. (2008). <i>Manuscript writing support system for researchers: list of their achievements</i> . <i>Ceramics Japan</i> , 42(7), 520-524. [PubMan]
	Todoroki, S.-i. (2007). <i>Two serendipitous episodes -- How I embarked on research</i> . [PubMan]
	Todoroki, S.-i. (2006). <i>Heat-induced breakage of an optical circuit at a linking silica glass fibers</i> . <i>J. Ceram. Soc. Jpn.</i> , 114(8), 709-712. [PubMan]

Researcher Page

Researcher Page



Home

search within this site

Search

日本語

English

Home

Last modified: September 25, 2009

Todoroki, Shin-ichi

Senior Researcher

- [Optronic Materials Center](#)
- [National Institute for Materials Science](#)



About

Working on optical fibers being exposed to high power laser beam.
Interested in digital publishing using free software, including writing light essays.

Completed my PhD in engineering at Kyoto University in 1993.

See also

- [My homepage @ geocities.jp](#)
- [My essays @ scribd.com](#)
- [My video works @ youtube.com](#)

Info

This page is cited by the article,

Romary, Laurent and Armbruster, Chris, "Beyond Institutional Repositories" (June 25, 2009). Available at Social Science Research Network: <http://ssrn.com/abstract=1425692> (ref. 18 in page 19)

Categories

- > [Blog](#) (2)
- > [Blog-based research notebook](#) (2)
- > [Carbon](#) (2)
- > [critical cooling rate](#) (1)
- > [crystallization tendency](#) (1)
- > [electronic notebook](#) (1)
- > [Erbium](#) (1)
- > [Escience](#) (1)
- > [Fiber fuse](#) (11)
- > [finite element method](#) (1)
- > [fluorescence lifetime](#) (1)
- > [Glass](#) (12)
- > [high-throughput experimentation](#) (1)
- > [hybrid device](#) (2)
- > [Informatics](#) (3)
- > [insertion loss](#) (1)
- > [Laser-induced damage](#) (2)
- > [Latex](#) (1)
- > [light-induced deformation](#) (1)
- > [multi-dimensional data](#) (2)
- > [Object-oriented](#) (2)
- > [optical fiber](#) (9)
- > [optical fuse](#) (5)
- > [plastic flow](#) (1)
- > [Presentation](#) (3)
- > [refractive index](#) (1)

Archives

- ☰ 2009 (7)
- ☰ 2008 (3)
- ☰ 2006 (3)
- ☰ 2005 (6)
- ☰ 2004 (7)
- ☰ 2003 (3)
- ☰ 2002 (4)
- ☰ 1999 (2)
- ☰ 0 (7)

RSS

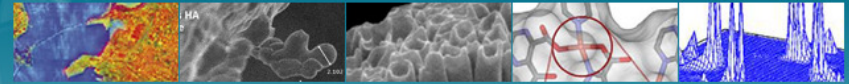
 [Entries](#)

Rese

PhD Todoroki, Shin-ichi	
Optronic Materials Center, National Institute for Materials Science	
Researcher Profile	<p>Current Position: Senior Researcher</p> <p>Researcher Homepage(s): Researcher Blog</p> <p>Researcher ID: http://pubman.mpdli.mpg.de/cone/persons/resource/persons1008</p> <p>Research Fields: Computer Sciences: Free, Libre and Open Source Software; Informatics Libraries Engineering: Materials Engineering; Ceramic Engineering; Optical Engineering Informatics Library Science: Digital Libraries Physics: Materials Science</p>
External references	<p>WorldCat: Search for Todoroki, Shin-ichi</p> <p>Google Scholar: Search for Todoroki, Shin-ichi</p>
Publications	<p>Todoroki, S.-i. (2009). Longed-for functions for digital repository learn self-archiving activity. <i>DRFtech-Kyoto: Workshop of application of Informatics and eResearch</i>. Kyoto, 2009-09-07. [PubMan]</p> <p>Todoroki, S.-i. (2009). My joy of self-archiving. <i>1st SPARC Japan seminar publication from researchers through a variety of network media in the general public</i>. Tokyo, 2009-06-25 - 2009-06-25. [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Make the best use of your serendipity by inspiration</i>. [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Merci, XTeXe, Spazio</i>. [PubMan]</p> <p>Todoroki, S.-i. (2009). Publish your joy of research activities through the preservation and dissemination of research activities. <i>の保存と発信 - 発想力を維持するリポジトリを目標として</i>. Tokyo, 2009-03-02. [PubMan]</p> <p>Todoroki, S.-i. (2009). <i>Chance favors the prepared mind</i>. [PubMan]</p> <p>Todoroki, S.-i. (2008). How we pave the way of NIMS eSciDoo? -A user's perspective. <i>Scientific Information Open Summit: Forum #27-18</i>. Yokohama, JAPAN, 2008-03-18. [PubMan]</p> <p>Todoroki, S.-i. (2008). <i>Disseminate your work beyond your research field</i>. [PubMan]</p> <p>Todoroki, S.-i. (2008). In situ observation of modulated light emission from void train over hetero-core splice point. <i>PLoS ONE</i>, 3(9), e3276. doi:10.1371/journal.pone.0003276. [PubMan]</p> <p>Todoroki, S.-i. (2008). Manuscript writing support system for researcher list of their achievements. <i>Ceramics Japan</i>, 42(7), 520-524. [PubMan]</p> <p>Todoroki, S.-i. (2007). <i>Two serendipitous episodes -- How I embarked on research</i>. [PubMan]</p> <p>Todoroki, S.-i. (2006). Heat-induced breakage of an optical circuit at a linking silica glass fibers. <i>J. Ceram. Soc. Jpn.</i>, 114(8), 709-712. [PubMan]</p> <p>Todoroki, S.-i. (2006). In-Situ Observation of Fiber-Fuse Propagation. <i>Ceramics Japan</i>, 44(6A), 4022-4024. [PubMan]</p>

Researcher Page

Researcher Page



Home

search within this site

Search

日本語

English

Home

Last modified: September 25, 2009

Todoroki, Shin-ichi

Senior Researcher



- [Optronic Materials Center](#)
- [National Institute for Materials Science](#)

About

Working on optical fibers being exposed to high power laser beam.
Interested in digital publishing using free software, including writing light essays.

Completed my PhD in engineering at Kyoto University in 1993.

See also

- [My homepage @ geocities.jp](#)
- [My essays @ scribd.com](#)
- [My video works @ youtube.com](#)

Info

This page is cited by the article,

Romary, Laurent and Armbruster, Chris, "Beyond Institutional Repositories" (June 25, 2009). Available at Social Science Research Network: <http://ssrn.com/abstract=1425692> (ref. 18 in page 19)

Categories

- > [Blog](#) (2)
- > [Blog-based research notebook](#) (2)
- > [Carbon](#) (2)
- > [critical cooling rate](#) (1)
- > [crystallization tendency](#) (1)
- > [electronic notebook](#) (1)
- > [Erbium](#) (1)
- > [Escience](#) (1)
- > [Fiber fuse](#) (11)
- > [finite element method](#) (1)
- > [fluorescence lifetime](#) (1)
- > [Glass](#) (12)
- > [high-throughput experimentation](#) (1)
- > [hybrid device](#) (2)
- > [Informatics](#) (3)
- > [insertion loss](#) (1)
- > [Laser-induced damage](#) (2)
- > [Latex](#) (1)
- > [light-induced deformation](#) (1)
- > [multi-dimensional data](#) (2)
- > [Object-oriented](#) (2)
- > [optical fiber](#) (9)
- > [optical fuse](#) (5)
- > [plastic flow](#) (1)
- > [Presentation](#) (3)
- > [refractive index](#) (1)

Archives

- ☰ 2009 (7)
- ☰ 2008 (3)
- ☰ 2006 (3)
- ☰ 2005 (6)
- ☰ 2004 (7)
- ☰ 2003 (3)
- ☰ 2002 (4)
- ☰ 1999 (2)
- ☰ 0 (7)

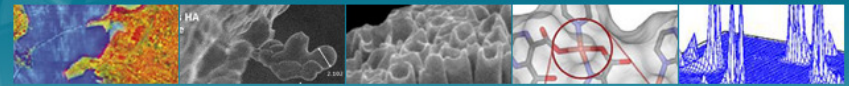
RSS

 [Entries](#)

Rese

Researcher Page

Researcher Page



Home

search within this site

Search

日本語

English

Home

Last modified: September 25, 2009

Todoroki, Shin-ichi

Senior Researcher

- [Optronic Materials Center](#)
- [National Institute for Materials Science](#)



About

Categories

- > Blog (2)
- > Blog-based research notebook (2)
- > Carbon (2)
- > critical cooling rate (1)
- > crystallization tendency (1)
- > electronic notebook (1)
- > Erbium (1)
- > Esience (1)
- > Fiber fuse (11)
- > finite element method (1)
- > fluorescence lifetime (1)
- > Glass (12)
- > high-throughput experimentation (1)
- > hybrid device (2)
- > Informatics (3)
- > insertion loss (1)
- > Laser-induced damage (2)
- > Latex (1)
- > light-induced deformation (1)
- > multi-dimensional data (2)
- > Object-oriented (2)
- > optical fiber (9)
- > optical fuse (5)
- > plastic flow (1)
- > Presentation (3)
- > refractive index (1)

Archives

- 2009 (7)
- 2008 (3)
- 2006 (3)
- 2005 (6)
- 2004 (7)
- 2003 (3)
- 2002 (4)
- 1999 (2)
- 0 (7)

RSS

Entries

PhD Todoroki, Shin-ichi


Optronic Materials Center, National Institute for Materials Science

Researcher Profile	Current Position	Senior Researcher
	Researcher Homepage(s)	Researcher Blog
	Researcher ID	http://pubman.mpdl.mpg.de/cone/persons/resource/persons1008
	Research Fields	Computer Sciences: Free, Libre and Open Source Software; Informatics Libraries Engineering: Materials Engineering; Ceramic Engineering; Optical Engineering Informatics Library Science: Digital Libraries Physics: Materials Science
External references	WorldCat	Search for Todoroki, Shin-ichi
	Google Scholar	Search for Todoroki, Shin-ichi
Publications	<p>Todoroki, S.-i. (2009). Longed-for functions for digital repository learn self-archiving activity. <i>DRFtech-Kyoto: Workshop of application of Informatics and eResearch, Kyoto, 2009-09-07</i>. [PubMan]</p> <p>Todoroki, S.-i. (2009). My joy of self-archiving. <i>1st SPARC Japan seminar publication from researchers through a variety of network media in the general public</i>. Tokyo, 2009-06-25 - 2009-06-25. [PubMan]</p>	

Archive for the 'crystallization tendency' Category

escidoc:28377

I, F js, Y

Todoroki, S.-i., Inoue, S., & Matsumoto, T. (2002). Combinatorial evaluation system for thermal properties of glass materials using a vertical furnace with temperature gradient. *Appl. Surface Sci.*, 189(3-4), 241-244.  [pubman]

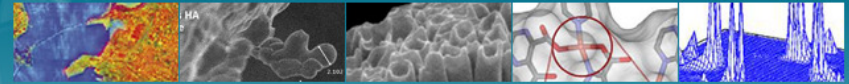
Posted in [Glass](#), [critical cooling rate](#), [crystallization tendency](#), [time-temperature-transfer diagram](#) | Comments Off

gh power laser beam.
ware, including writing light essays.
iversity in 1993.

ond Institutional Repositories" (June 25,
network: <http://ssrn.com>

Researcher Page

Researcher Page



Home

search within this site

Search

日本語

English

Home

Last modified: September 25, 2009

Todoroki, Shin-ichi

Senior Researcher



- [Optronic Materials Center](#)
- [National Institute for Materials Science](#)

About

Categories

- > [Blog](#) (2)
- > [Blog-based research notebook](#) (2)
- > [Carbon](#) (2)
- > [critical cooling rate](#) (1)
- > [crystallization tendency](#) (1)
- > [electronic notebook](#) (1)
- > [Erbium](#) (1)
- > [Escience](#) (1)
- > [Fiber fuse](#) (11)
- > [finite element method](#) (1)
- > [fluorescence lifetime](#) (1)
- > [Glass](#) (12)
- > [high-throughput experimentation](#) (1)
- > [hybrid device](#) (2)
- > [Informatics](#) (3)
- > [insertion loss](#) (1)
- > [Laser-induced damage](#) (2)
- > [Latex](#) (1)
- > [light-induced deformation](#) (1)
- > [multi-dimensional data](#) (2)
- > [Object-oriented](#) (2)
- > [optical fiber](#) (9)
- > [optical fuse](#) (5)
- > [plastic flow](#) (1)
- > [Presentation](#) (3)
- > [refractive index](#) (1)

Archives

- ☰ 2009 (7)
- ☰ 2008 (3)
- ☰ 2006 (3)
- ☰ 2005 (6)
- ☰ 2004 (7)
- ☰ 2003 (3)
- ☰ 2002 (4)
- ☰ 1999 (2)
- ☰ 0 (7)

RSS

[Entries](#)

PhD Todoroki, Shin-ichi

Optronic Materials Center, National Institute for Materials Science

Researcher Profile	Current Position	Senior Researcher
	Researcher Homepage(s)	Researcher Blog
	Researcher ID	http://pubman.mpdl.mpg.de/cone/persons/resource/persons1008
	Research Fields	Computer Sciences Free, Libre and Open Source Software; Informatics Libraries Engineering: Materials Engineering; Ceramic Engineering; Optical Engineering Informatics Library Science: Digital Libraries Physics: Materials Science
External references	WorldCat	Search for Todoroki, Shin-ichi
	Google Scholar	Search for Todoroki, Shin-ichi
Publications		Todoroki, S.-i. (2009). Longed-for functions for digital repository learn self-archiving activity. <i>DRFtech-Kyoto: Workshop of application of Informatics and eResearch, Kyoto, 2009-09-07</i> . [PubMan]
		Todoroki, S.-i. (2009). My joy of self-archiving. <i>1st SPARC Japan seminar publication from researchers through a variety of network media in the general public</i> . Tokyo, 2009-06-25 - 2009-06-25. [PubMan]

Archive for the 'crystallization tendency' Category

escidoc:28377

l, F js, Y

Todoroki, S.-i., Inoue, S., & Matsumoto, T. (2002). Combinatorial evaluation system for thermal properties of glass materials using a vertical furnace with temperature gradient. *Appl. Surface Sci.*, 189(3-4), 241-244. [\[pubman\]](#)

Posted in [Glass](#), [critical cooling rate](#), [crystallization tendency](#), [time-temperature-transfer diagram](#) | Comments Off

PhD Todoroki, Shin-ichi
Opitronic Materials Center, National Institute for Materials Science

Researcher Profile	Current Position	Senior Researcher
	Researcher Homepage(s)	Researcher Blog
	Researcher ID	http://pubman.mpdli.mpg.de/cone/persons/resource/persons1008
	Research Fields	Computer Sciences: Free, Libre and Open Source Software; Informatics Libraries Engineering: Materials Engineering; Ceramic Engineering; Optical Engineering Informatics Library Science: Digital Libraries Physics: Materials Science
External references	WorldCat	Search for Todoroki, Shin-ichi
	Google Scholar	Search for Todoroki, Shin-ichi
Publications		Todoroki, S.-i. (2009). Longed-for functions for digital repository learn self-archiving activity. <i>DRFtech-Kyoto: Workshop of application of Inf and eResearch</i> . Kyoto, 2009-09-07. [PubMan]
		Todoroki, S.-i. (2009). My joy of self-archiving. <i>1st SPARC Japan seminar publication from researchers through a variety of network media in the general public</i> . Tokyo, 2009-06-25 - 2009-06-25. [PubMan]

Researcher Page

Home

Todoroki, Shin-ichi
Senior Researcher

[Opitronic Materials](#)
[National Institute for Materials Science](#)

About

Researcher Page

Home

Combinatorial evaluation system for thermal properties of glass materials using a vertical furnace with temperature gradient

S. TODOROKI*, S. INOUE and T. MATSUMOTO

National Institute for Research in Inorganic Materials, Namiki 1-1, Tsukuba, Ibaraki 305-0044, JAPAN

Abstract

Critical cooling rate Q_c for zinc tellurite glass system is determined based on the time-temperature-transfer (T-T) diagrams, which are compiled by analyzing the crystallized area in the glass sample libraries annealed simultaneously by a furnace with temperature gradient. This method reduces the laborious routine work for preparation, which is needed in the conventional method. Since the surface-volume ratio of the present samples is large, their crystallization is mainly governed by heterogeneous nucleation. Thus, the Q_c values in this study can be used as a practical index for the glass products whose surface should be free of being ground and/or polished, such as fire-polished lenses, optical fibers and waveguides.

Key words: glass, crystallization tendency, critical cooling rate, time-temperature-transfer diagram

EACS: 06.60-*, 06.60.Ei, 07.20.Hy, 65.90-1

1 Introduction


The methodology known as combinatorial chemistry has been widely used in the field of organic chemistry such as medicine to bring about fruitful results in its research and development. Recently, it is shown that this method is also applicable to the R & D of inorganic materials and devices whose form is thin film (See other articles in this volume). This paper reports about an expansion of this applicability into hot melt processes which are typical and important in glass industry.

* Corresponding author.
Email address: todoroki@nirim.go.jp (S. TODOROKI).

Preprint submitted to Elsevier Preprint 23 October 2000

Archive for the 'crystallization tendency' Category

escidoc:28377

Todoroki, S.-i., Inoue, S., & Matsumoto, T. (2002). Combinatorial evaluation system for thermal properties of glass materials using a vertical furnace with temperature gradient. *Appl. Surface Sci.*, 189(3-4), 241-244.  [\[pubman\]](#)

Posted in [Glass](#), [critical cooling rate](#), [crystallization tendency](#), [time-temperature-transfer diagram](#) | Comments Off

and Institutional Repositories" (June 25, 2009). Network: <http://ssrn.com>

search within this site

日本語


Categories

- [Blog](#) (2)
- [Blog-based research notebook](#) (2)
- [Carbon](#) (2)
- [critical cooling rate](#) (1)
- [crystallization tendency](#) (1)
- [electronic notebook](#) (1)
- [Erbium](#) (1)
- [Escience](#) (1)
- [Fiber fuse](#) (11)
- [finite element method](#) (1)
- [fluorescence lifetime](#) (1)
- [Glass](#) (12)
- [high-throughput experimentation](#) (1)
- [hybrid device](#) (2)
- [Informatics](#) (3)
- [insertion loss](#) (1)
- [Laser-induced damage](#) (2)
- [Latex](#) (1)
- [light-induced deformation](#) (1)
- [multi-dimensional data](#) (2)
- [Object-oriented](#) (2)
- [optical fiber](#) (9)
- [optical fuse](#) (5)
- [plastic flow](#) (1)
- [Presentation](#) (3)
- [refractive index](#) (1)

Archives

- 2009 (7)
- 2008 (3)
- 2006 (3)
- 2005 (6)
- 2004 (7)
- 2003 (3)
- 2002 (4)
- 1999 (2)
- 0 (7)

RSS

 [Entries](#)

PhD Todoroki, Shin-ichi
Opitronic Materials Center, National Institute for Materials Science

Researcher Profile	Current Position	Senior Researcher
	Researcher Homepage(s)	Researcher Blog
	Researcher ID	http://pubman.mpdl.mpg.de/cone/persons/resource/persons1008
	Research Fields	Computer Sciences: Free, Libre and Open Source Software; Informatics Libraries Engineering: Materials Engineering; Ceramic Engineering; Optical Engineering Informatics Library Science: Digital Libraries Physics: Materials Science
External references	WorldCat	Search for Todoroki, Shin-ichi
	Google Scholar	Search for Todoroki, Shin-ichi
Publications		Todoroki, S.-i. (2009). Longed-for functions for digital repository learn self-archiving activity. <i>DRFtech-Kyoto: Workshop of application of Informatics and eResearch</i> . Kyoto, 2009-09-07. [PubMan]
		Todoroki, S.-i. (2009). My joy of self-archiving. <i>1st SPARC Japan seminar publication from researchers through a variety of network media in quality of the general public</i> . Tokyo, 2009-06-25 - 2009-06-25. [PubMan]

Researcher Page

Home

Combinatorial evaluation system for thermal properties of glass materials using a vertical furnace with temperature gradient

S. TODOROKI*, S. INOUE and T. MATSUMOTO
National Institute for Research in Inorganic Materials, Namiki 1-1, Tsukuba, Ibaraki 305-0044, JAPAN

Abstract
Critical cooling rate Q_c for zinc tellurite glass system is determined based on the time-temperature-transfer (T-T-T) diagrams, which are compiled by analyzing the crystallized area in the glass sample libraries annealed simultaneously by a furnace with temperature gradient. This method reduces the laborious routine work for preparation, which is needed in the conventional method. Since the surface-volume ratio of the present samples is large, their crystallization is usually governed by heterogeneous nucleation. Thus, the Q_c values in this study can be used as a practical index for the glass products whose surface should be free of being ground and/or polished, such as fire-polished lenses, optical fibers and waveguides.

Key words: glass, crystallization tendency, critical cooling rate, time-temperature-transfer diagram
EACS: 06.60--c, 06.60.Ei, 07.20.Hy, 65.90--1

Categories
Blog (2)
Blog-based research notebook (2)
Carbon (2)
critical cooling rate (1)
crystallization tendency (1)
electronic notebook (1)
Erbium (1)
Esience (1)
Fiber fuse (11)
finite element method (1)
fluorescence lifetime

Archives
2009 (7)
2008 (3)
2006 (3)
2005 (6)
2004 (7)
2003 (3)
2002 (4)
1999 (2)
0 (7)

RSS

Archive for the 'crystallization tendency' Category

escidoc:28377

Todoroki, S.-i., Inoue, S., & Matsumoto, T. (2002). Combinatorial evaluation system for thermal properties of glass materials using a vertical furnace with temperature gradient. *Appl. Surface Sci.*, 189(3-4), 241-244. [\[pubman\]](#)

Posted in [Glass](#), [critical cooling rate](#), [crystallization tendency](#), [time-temperature-transfer diagram](#) | Comments Off

1 Introduction

The methodology known as combinatorial chemistry is widely used in the field of organic chemistry such as research and development. Recently, the R & D of inorganic material articles in this volume). This paper reports on hot melt processes which are...

* Corresponding author.
Email address: todoroki@airim.mnrc.nim.ac.jp

Preprint submitted to Elsevier Preprints

HOME MY ITEMS QA WORKSPACE SUBMISSION BASKET (0)

Advanced Search > Search Results > View Item

View item

ITEM ACTIONS EXPORT
[Create new revision](#) | [Use item as template](#) | [Add to Basket](#)

[View Item](#) | [Release History](#) | [Revisions](#) | [Item Statistics](#) | [Local Tags](#)

Combinatorial evaluation system for thermal properties of glass materials using a vertical furnace with temperature gradient

Contact: Moderator

Basic
Bookmark this item: <http://pubman.mpdl.mpg.de/pubman/item/escidoc:28377:4>

Genre: Journal Article


Files
Name: [cmb_acc2.pdf](#) (Postprint)
Description: Author version
Visibility: Public
MIME-Type / Size: application/pdf / 81KB
Copyright Date: -
Copyright Info: -
License: -

Locators
Locator: [http://dx.doi.org/10.1016/S0169-4332\(01\)01016-9](http://dx.doi.org/10.1016/S0169-4332(01)01016-9) (Publisher version)
Description: -
Visibility: Public
Copyright Date: -
Copyright Info: -
License: -




Two Further Examples of Re-Using PubMan Data in Wordpress Blogs

Reinhold von Sengbusch



About



Reinhold von Sengbusch

On this website you find the publications of Prof. Dr. Reinhold von Sengbusch. Reinhold Oskar Kurt von Sengbusch (* 16 February 1898 in Riga; † 13 June 1985 in Hamburg) was a Director at the Max Planck Institut für Kulturpflanzenzüchtung in Hamburg-Volksdorf and one of the most important breeding researchers of the last century. In addition to many of his publications you can find out more about his [favorite topic](#), his [breeding achievements](#) and the [scientific impact](#) he had.

Reinhold von Sengbusch began to publish in 1924 and continued until the nineteen-eighties. Sengbusch alone and together with his colleagues published about 300 scientific articles. His institute produced about 600 publications. Over time the fulltext availability on this site will increase.

This collection is presented by the [Max Planck Digital Library](#). The photographs of Reinhold von Sengbusch and the Institute are provided by the [Archive of the Max Planck Society](#).

As we would like to increase the usability of this website, please feel free to send us your [comments](#).

This blog is proudly powered by [WordPress MU](#).
[Entries \(RSS\)](#) and [Comments \(RSS\)](#).

Pages


- » [About](#)
- » [Favorite Topic](#)
- » [Legal](#)
- » [Most Successful Topic](#)
- » [Most Yielding Topic](#)
- » [Scientific Impact](#)
- » [Vita](#)

Archives

Select Year

Categories

- » [Breeding](#) (18)
- » [Chemistry](#) (3)
- » [Educational](#) (3)
- » [Fish](#) (48)
- » [Carps](#) (24)
- » [Kidney stones](#) (17)
- » [Methods](#) (36)
- » [MPI](#) (11)
- » [Mushrooms](#) (80)
- » [Nutrition](#) (5)
- » [Pests](#) (7)
- » [Plants](#) (217)
- » [Fruit](#) (81)
- » [Strawberries](#) (77)
- » [Hemp](#) (15)
- » [Lupins](#) (53)
- » [Rye](#) (17)
- » [Tobacco](#) (3)
- » [Vegetables](#) (39)
- » [Asparagus](#) (1)
- » [Cabbage](#) (1)
- » [Carrots](#) (6)
- » [Chicory](#) (1)
- » [Peas](#) (2)
- » [Potatoes](#) (7)
- » [Soy](#) (1)
- » [Spinach](#) (4)
- » [Sugar beet](#) (1)
- » [Tomatoes](#) (11)
- » [Research](#) (19)
- » [Sengbusch](#) (3)
- » [Technique](#) (6)
- » [Tenerife](#) (4)
- » [Urology](#) (23)



<http://sengbusch.blogs.mpdl.mpg.de>



- Home
- About
- For Authors
- Repository
- Team
- Contact

LANGUAGE DESCRIPTION HERITAGE

an OPEN ACCESS DIGITAL LIBRARY



Recent additions

Moye, J. F. (2003). Reduplication in Kom: a morpho-syntactic study. magister Thesis, Université de Yaoundé. [pubman]

Mpoche, K. N. (1993). The Limbum noun phrase: (a generative approach). magister Thesis, Université de Yaoundé, Yaoundé. [pubman]

Asobo, I. S. (1989). The noun class system of Kole. magister Thesis, Université de Yaoundé. [pubman]

Noukeu, S. (2002). Esquisse phonologique du Kada (Guidar). magister Thesis, Université de Yaoundé. [pubman]

Nganmou, A. (1991). Modalites verbales: temps, aspect et mode Medumba. PhD Thesis, Université de Yaoundé. [pubman]

Bate, B. B. (1987). The noun class system of Bakweri. PhD Thesis, Université de Yaoundé. [pubman]

Mfonyam, J. N. (1989). Tone in orthography: the case of Bafut and related languages. PhD Thesis, Université de Yaoundé. [pubman]

Kouonang Nganmou, Alise, A. (1982). Esquisse phonologique du parler Bali-Kumbat. PhD Thesis, Université de Yaounde. [pubman]

Bitjaa Kody, Z. D. (2004). La dynamique des langues camerounaises en contact avec le Français: approche macrosociolinguistique. PhD Thesis, Univ., Yaounde. [pubman]

[Advanced Search](#)

Archive

Select Category

Add your work to LDH:

[Permission Form](#)

[For Authors](#)

Max Planck Society

[Max Planck Institute for Evolutionary Anthropology](#)

[MPI EVA Dept. of Linguistics](#)

[MPI EVA Library](#)

[Max Planck Digital Library](#)

[Open Access](#)

[CC Licenses](#)

[Open Access Information Platform](#)

PubMan Brings Benefits for ...

- **Scholars:**
 - Enhance the visibility of their scientific work
 - Link publication and research data

- **Institutes:**
 - Create dynamic views for web-publishing
 - Generate organizational or research-specific compilations and reports

- **Research Organizations:**
 - Provide a tool for Open Access publishing
 - Maintain their digital memory in a trusted repository

Links

- PubMan Live Server: <http://pubman.mpdl.mpg.de/>
- PubMan Demo Server: <http://test-pubman.mpdl.mpg.de/>
 - Login: demo
 - Password: demo
- PubMan Portal at the MPDL MediaWiki CoLab: <http://colab.mpdl.mpg.de/mediawiki/Portal:PubMan>

Thank You for Your Attention!

Questions?

jmueller@mpdl.mpg.de

Juliane Müller
Max Planck Digital Library
Munich, Germany

