

Ei Compendex®
Ei Compendex 1990® (File 288)
Ei Compendex 1970® (File 278)
Engineering Index Backfile® (File 988)

FILE DESCRIPTION

The **Ei Compendex®** database is the machine-readable version of *Engineering Index*, which provides abstracted information from the world's significant engineering and technological literature. Ei Compendex provides worldwide coverage of more than 4,500 journals and selected government reports and books. Subjects include: civil, energy, environmental, geological, and biological engineering; electrical, electronics, and control engineering; chemical, mining, metals, and fuel engineering; mechanical, automotive, nuclear, and aerospace engineering; computers, robotics, and industrial robots. In addition to journal literature, there are more than 480,000 records of significant published proceedings of engineering and technical conferences formerly indexed in *Ei Engineering Meetings®*. The four files cover different time periods with File 8 being the most comprehensive (1884-present). ONTAP® Compendex, File 208, is available for **ONline Training And Practice** and contains records from 2002-2007.

SUBJECT COVERAGE

- Aeronautical and Aerospace Engineering
- Applied Physics (High Energy, Plasma, Nuclear and Solid State)
- Bioengineering and Medical Equipment
- Chemical Engineering, Ceramics, Plastics and Polymers, Food Technology
- Civil and Structural Engineering, Environmental Technology
- Electrical, Instrumentation, Control Engineering, Power Engineering
- Electronics, Computers, Communications
- Energy Technology and Petroleum Engineering
- Engineering Management and Industrial Engineering
- Light and Optical Technology
- Marine Engineering, Naval Architecture, Ocean and Underwater Technology
- Mechanical Engineering, Automotive Engineering and Transportation
- Mining and Metallurgical Engineering, Materials Science

SOURCES

Publications from around the world are indexed, including approximately 2,600 journals, publications of engineering societies and organizations, technical reports, monographs, conferences.

TIPS**USE EXPLODE (!)**

to search narrower and related terms:
SELECT UNDERWATER STRUCTURES!

USE THE ONLINE THESAURUS

to check and select the thesaurus terms:
EXPAND (COMPUTER APPLICATIONS)

USE /MAJ LIMIT

to limit a search to major descriptors:
SELECT SOLAR ENERGY/MAJ

DIALOG FILE DATA

Inclusive Dates: 1884 to the present (File 8)
 1970 to the present (File 278)
 1990 to the present (File 288)
 1884-1969 (File 988)

Update Frequency: Closed (Files 208,988)
 Weekly (Files 278,288,8)

File Size:

More than 10M records as of September 2008 (File 8)
 Approximately 8.5M records (File 278)
 More than 5.9M records (File 288)
 More than 1.7 million records (File 988)

CONTACT

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SAMPLE RECORD

DIALOG(R)File 8: Ei Compendex(R) 1884-2008/Sep W1
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AA= 0018211580 E.I. COMPENDEX No: 20080911114980
 /TI Silica on silicon carbide
 AU= Presser, Volker; Nickel, Klaus G.
 CS=,CN= Corresp. Author/Affil: Presser, V.: Institute for Geosciences, Applied
 Mineralogy, Eberhard Karls Universitat Tubingen, Wilhelmstr 56, D-72074
 Tubingen, Germany
 Corresp. Author email: volker.presser@uni-tuebingen.de
 JN=,SO= Critical Reviews in Solid State and Materials Sciences (Crit Rev Solid
 Statae Mater Sci) (United States) 2008, 33/1 (1-99)
 PD=,PY= Publication Date: 20080229
 PU= Publisher: Taylor and Francis Inc.
 SN= ISSN: 1040-8436 eISSN: 1547-6561
 Publisher Item Identifier: 790590815
 DOI: 10.1080/10408430701718914
 DT=,RT= Document Type: Article; Journal Record Type: Abstract
 TC= Treatment: L; (Literature review); X; (Experimental)
 LA=,SL= Language: English Summary Language: English
 Number of References: 653
 /AB Silicon carbide (SiC) as both the most important non-oxide ceramic and
 promising semiconductor material grows stoichiometric SiO₂ as its native
 oxide. During passive oxidation, a surface transformation of SiC into
 silica takes place causing bulk volume and bulk mass increase. This review
 summarizes state-of-the-art information about the structural aspects of
 silicon carbide, silica, and SiC-SiO₂ interfaces and discusses
 physicochemical properties and kinetics of the processes involved. A
 special section describes the electronic properties of carbide-oxide
 interfaces, which are inferior compared to Si-SiO₂ interfaces, limiting the
 use of SiC-based electronics. In the oxidation of SiC there is a variety of
 parameters (e.g., porosity, presence of sintering aids, impurities,
 crystallographic orientation, surface treatment, and atmospheric
 composition) influencing the process. Therefore, the kinetics can be
 complex and will be discussed in detail. Nonetheless, a general
 linear-parabolic time-law can be found for most SiC materials for passive
 oxidation, thus indicating a mainly diffusion-controlled mechanism. The
 pronounced anisotropy of SiC expresses itself by quite different oxidation
 rates for the various crystallographic faces. Manifold impact factors are
 reflected by oxidation rate-constants for silicon carbide that vary over
 orders of magnitude. The understanding of SiC oxidation and silica
 formation is still limited; therefore, different oxidation models are
 presented and evaluated in the light of current knowledge.
 /DE Descriptors: Growth kinetics; Oxidation; Silicon carbide; *Silica
 /ID Identifiers: Crystallographic faces; Oxidation rates
 CC= Classification Codes:
 801.2 (Biochemistry)
 802.2 (Chemical Reactions)
 804.2 (Inorganic Compounds)

SEARCH OPTIONS

BASIC INDEX

SEARCH SUFFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
—	—	All Basic Index Fields	Word	S BULK(W)VOLUME
/AB	AB	Abstract	Word	S SILICON(W)CARBIDE/AB
/DE	DE	Descriptor ¹	Word & Phrase	S GROWTH(W)KINETICS/DE
/ID	ID	Identifier ²	Word & Phrase	S GROWTH KINETICS/DE
/TI	TI	Title ³	Word	S CRYSTALLOGRAPHIC(W)FACES/ID
				S CRYSTALLOGRAPHIC FACES/ID
				S SILICA(1W)SILICON(W)CARBIDE/TI

¹ Also /DF.

² Also /IF.

³ Does not include Conference Title, which is searchable with CT=.

ADDITIONAL INDEXES

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
AA=	AA	E.I. Compendex Number	Phrase	S AA=20080911114980
AU=	AU	Author	Phrase	S AU=PRESSER, VOLKER
—	AZ	DIALOG Accession Number		
BN=	BN	International Standard Book Number (ISBN) ⁴	Phrase	S BN=978354060
CC=	CC	CAL Classification Code ⁷	Phrase	S CC=804.2
CC=	CC	CAL Classification Heading	Word & Phrase	S CC=(INORGANIC(W)COMPOUNDS)
				S CC=INORGANIC COMPOUNDS
CD=	CD	Conference Date	Phrase	S CD=20080407
CF=	CF	E.I. Conference Number	Phrase	S CF=72154
CL=	CL	Conference Location	Word	S CL=(SCHAUMBURG(W)IL)
CO=	CO	CODEN	Phrase	S CO=KERTA
CS=	CS	Corporate Source	Word	S CS=(INSTITUTE(1W)GEOSCIENCES(F)TUBINGEN)
CT=	CT	Conference Title ⁵	Word	S CT=(49TH(W)AIAA(W)ASME(W)ASCE(W)AHS))
CY=	CY	Conference Year	Phrase	S CY=2008
DT=	DT	Document Type	Phrase	S DT=ARTICLE
JN=	JN	Journal Name ⁵	Phrase	S JN=CRITICAL REVIEWS IN SOLID STATE?
LA=	LA	Language	Phrase	S LA=ENGLISH
PD=	PD	Publication Date	Phrase	S PD=20080229
PU=	PU	Publisher	Word	S PU=(TAYLOR(1W)FRANCIS)
PY=	PY	Publication Year	Phrase	S PY=2008
RN=	RN	IEEE Conference Proceeding Number	Word	S RN=IEEE 99-00031
RT=	RT	Record Type	Phrase	S RT=ABSTRACT
SL=	SL	Summary Language	Phrase	S SL=ENGLISH
SN=	SN	International Standard Serial Number (ISSN)	Phrase	S SN=1040-8436
				S SN=10408436
SO=	SO	Source Information ⁶	Word	S SO=(CRITICAL(W)REVIEWS(F)MATERIALS)
SP=	SP	Conference Sponsor	Word	S SP=AIAA
TC=	TC	Treatment Code	Phrase	S TC=L
UD=	—	Update	Phrase	S UD=9999

⁴ Available only for records from January 1985 forward.

⁵ Also searchable using SO=.

⁶ Search and Display, depending on document type, may include: Conference Title, Conference Location, Conference Sponsor, Conference Date, Journal Name, Publication Year, Report Number, Volume, and Pagination.

⁷ Truncate the code for the complete retrieval.

Files 8,278,288,988
SPECIAL FEATURES

Ei Compendex®

For command descriptions, enter HELP LIMIT, HELP SORT, HELP RANK, HELP DUP, HELP CURRENT online.

LIMIT	/ENG -- English Language /MAJ -- Major Descriptor /NONENG -- Non-English Language /YYYY -- Publication Year	S DT=BOOK/ENG S SILICA/MAJ S S1/NONENG S SILICON(W)CARBIDE/2007:2008
SORT	AA, AU, CD, CS, CT, JN, PY, TI	SORT S3/ALL/JN SORT S2/ALL/PY/D
RANK	All phrase- and numeric-indexed fields in the Additional Indexes can be ranked. Other RANK codes include: CS, DE, ID	RANK DE RANK AU S4
RD, ID	Remove duplicates (RD) or identify duplicates (ID,IDO).	RD S5
CURRENT	Search only the most recent year plus one (CURRENT1) to five (CURRENT5) years.	B 8 CURRENT2

PREDEFINED FORMAT OPTIONS

NO.	DIALOGWEB FORMAT	RECORD CONTENT
1	--	DIALOG Accession Number
2	--	Full Record except Abstract
3	Medium	Bibliographic Citation
4	--	Full Record with Tagged Fields
5	--	Full Record
6	Short	Title and Publication Year
7	Long	Full Record except Indexing
8	Free	Title, Indexing, and Publication Year
9	Full	Full Record
K	--	KWIC (Key Word In Context) displays a window of text; may be used alone or with other formats

OTHER OUTPUT OPTIONS

For an explanation, enter HELP TYPE, HELP UDF, HELP TAG online.

USER DEFINED FORMATS	Display codes listed in the Search Options tables can be used to customize output.	TYPE S3/AU,TI,SO/1-5 PRINT S2/TI, CS, PY/ALL
TAG	Output can be displayed with tags identifying each display field.	TYPE S3/3/1-5 TAG PRINT S2/9/ALL TAG
DIRECT RECORD ACCESS	If the accession number of a specific record is known, it can be used to display the record directly.	TYPE 1082931/5 DISPLAY 1029361/AU,TI PRINT 1020671/9

FOR ONLINE HELP:

See HELP FIELDS 8 for searchable fields; HELP FORMAT 8 for output formats; HELP LIMIT 8 for limits; HELP RATES 8 for cost information; HELP SORT 8 for sorts.