

Aluminium Industry Abstracts

FILE DESCRIPTION

Aluminium Industry Abstracts (AIA), formerly World Aluminum Abstracts (WAA), provides coverage of the world's technical literature on aluminum, production processes, products, applications, and business developments. All aspects of the aluminum industry, aside from mining, are covered.

SUBJECT COVERAGE

Major areas of coverage include:

- Aluminum industry
- Aluminum intermetallics
- Business information
- End uses of aluminum
- Engineering properties and tests
- Extractive metallurgy
- Melting, casting, and foundry
- Metalworking, fabrication, and finishing
- Ores, extraction of alumina and aluminum
- Physical and mechanical metallurgy
- Quality control and tests

SOURCES

The AIA database includes information abstracted from more than 3,000 scientific and technical journals, government reports, conference proceedings, dissertations, books, and other publications. The database corresponds to the print *Aluminium Industry Abstracts*.

TIPS

USE FILE 33

to search for all information relating to aluminum.

USE /TI AND /DE

for precise subject searching:

S GALLIUM(W)ARSENIDES/TI,DE

USE SUBJECT HEADINGS or

SUBJECT HEADING CODES

to narrow a search to a topic.

S SH=ALUMINUM EXTRACTION

S SC=23

USE RANK

to find experts working in an area of interest.

S PLASMA ARC MELTING

RANK AU

DIALOG FILE DATA

Inclusive Dates: 1972 to the present

Update Frequency:

Monthly (Approx. 750 records per update)

File Size: More than 250,000 records as of July 2005

CONTACT

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SAMPLE RECORD

DIALOG(R)File 33: Aluminium Industry Abstracts
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AA= 00000262438 IP ACCESSION NO: 200504-R.3-02477
/TI Evidence of strong phonon-assisted resonant intervalley up-transfer for electrons in type-II GaAs/AlAs superlattices
AU= Mu, Xiaodong; Ding, Yujie J; Wang, Zhiming; Salamo, Gregory J
CS= Department of Electrical and Computer Engineering, Lehigh University, 19 Memorial Drive West, Bethlehem, PA 18015
JN=,SO= Proceedings of SPIE: Ultrafast Phenomena in Semiconductors and Nanostructure Materials VIII, v SPIE Volume 5352, p 276-283
PD=,PY= PUBLICATION DATE: 2004
PU= PUBLISHER: SPIE - The International Society for Optical Engineering, 1000 20th Street, P.O. Box 10, Bellingham, WA, 98225
CP= COUNTRY OF PUBLICATION: USA
PUBLISHER URL: <http://www.spie.org>
PUBLISHER EMAIL: spie@spie.org

CT=,CL=,CD= CONFERENCE:
Ultrafast Phenomena in Semiconductors and Nanostructure Materials VIII, San Jose, CA, USA, 26-29 Jan. 2004
DT= DOCUMENT TYPE: Conference Paper; Journal Article
RT= RECORD TYPE: Abstract
LA= LANGUAGE: English
BN= ISBN: 0-8194-5260-2
RN= Report NO: SPIE Volume 5352
NOTES: Graphs; Spectra; Numerical Data
NO. OF REFS.: 12
DOI: 10.1117/12.529066
FS= FILE SEGMENT: Aluminium Industry Abstracts

/AB ABSTRACT:
We demonstrate that longitudinal-optical (LO) phonons efficiently pump electrons from the quasi-X states to the quasi-I states in short-period type-II GaAs/AlAs superlattices. At a very low temperature, the phonon-assisted electron uptransfer can occur if the energy difference between the lowest quasi-I states and quasi-X states is equal to or less than the LO phonon energies. As the temperature increases, however, kinetic energies of the electrons can facilitate the electron up-transfer. As a result, we have observed peculiar behaviors on these superlattices. First, photoluminescence intensity for the quasi-direct transition drastically increases as the temperature or pump power increases. Second, the dependence of the integrated photoluminescence intensity on the pump power exhibits a square power law.

/DE DESCRIPTORS: Gallium arsenides; Aluminum arsenides; Superlattices; Electron states; Photoluminescence; Phonons; Semiconductors; Nanostructure; Electron transfer; Transition; Kinetic energy
SC=,SH,SH= SUBJ CATG: R.3, Physical Properties

SEARCH OPTIONS

BASIC INDEX

SEARCH SUFFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
—	—	All Basic Index Fields	Word	S UP(W)TRANSFER
/AB	AB	Abstract	Word	S LOW(W)TEMPERATURE/AB
/DE	DE	Descriptor ¹	Word & Phrase	S GALLIUM(W)ARSENIDES/DE S KINETIC ENERGY?/DE
/ID	ID	Identifier	Word & Phrase	S EXTRUSION/ID S HEAT TREAT?/ID
/SH	SH	Subject Category ²	Word	S PHYSICAL(W)PROPERTIES/SH
/TI	TI	Title	Word	S INTERVALLEY(W)UP(W)TRANSFER/TI

¹ Also /DF.

² Searchable in the Basic Index and in the Additional Indexes.

ADDITIONAL INDEXES

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
AA=	AA	CSA Accession Number	Phrase	S AA=200504-R.3-02477
AU=	AU	Author	Phrase	S AU=MU, X?
—	AZ	DIALOG Accession Number		
BN=	BN	International Standard Book Number (ISBN)	Phrase	S BN=0-8194-5260-2 S BN=0819452602
CD=	CD	Conference Date	Phrase	S CD=20040126
CL=	CL	Conference Location	Word & Phrase	S CL=(SAN(W)JOSE) S CL=ANAHEIM, CA?
CP=	CP	Country of Publication	Phrase	S CP=USA S CP=NEW ZEALAND
CS=	CS	Corporate Source	Word & Phrase	S CS=(ELECTRICAL(S)COMPUTER) S CS=DEPARTMENT OF ELECTRICAL?
CT=	CT	Conference Title	Word	S CT=(ULTRAFAST(W)PHENOMENA)
CY=	CY	Conference Year	Phrase	S CY=2004
DT=	DT	Document Type	Phrase	S DT=JOURNAL ARTICLE
FS=	FS	File Segment	Phrase	S FS=ALUMINIUM INDUSTRY ABSTRACTS
—	II	Digital Object Identifier		
JN=	JN	Journal Name	Phrase	S JN=PROCEEDINGS OF SPIE?
LA=	LA	Language	Phrase	S LA=GERMAN
MC=	MC	Materials Classification	Phrase	S MC=ALUMINUM BASE ALLOY?
ML=	ML	Materials	Phrase	S ML=AL-4CU
NO=	NO	Document Number	Word & Phrase	S NO=(BDX(W)613(W)2485) S NO=BDX-613-2485
—	NR	Number of References		
—	NT	Note		
PD=	PD	Publication Date	Phrase	S PD=20040000
PU=	PU	Publisher	Word	S PU=SPIE?
PY=	PY	Publication Year	Phrase	S PY=2004
RN=	RN	Report Number	Word & Phrase	S RN=5352 S RN=SPIE VOLUME 5352
RT=	RT	Record Type	Phrase	S RT=ABSTRACT
SC=	SC	Subject Category	Phrase	S SC=R.3
SH=	SH	Subject Category Text ²	Phrase	S SH=PHYSICAL PROPERTIES
SN=	SN	International Standard Serial Number (ISSN)	Phrase	S SN=0883-2900
SO=	SO	Source Information	Word	S SO=(ULTRAFAST(W)PHENOMENA)
UD=	—	Update	Phrase	S UD=9999

File 33

SPECIAL FEATURES

Aluminium Industry Abstracts

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

LIMIT	/ABS -- Record has an Abstract /NOABS -- Non-English-language Records /YYYY -- Publication Year	S S3/ABS S S3/NOABS S S2/2004
SORT	AA, AU, CS, JN, PD, PY, TI	SORT S3/ALL/PY/D SORT S1/ALL/TI
RANK	All phrase- and numeric-indexed fields in the Additional Indexes can be ranked.	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 33 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	Bibliographic Citation and Abstract
8	Free	Title, Indexing, and Publication Year
9	Full	Full Record

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/1-5 PRINT S2/TI,AB/ALL
TAG	Output can be displayed with tags identifying each display field.	TYPE S2/5/1-5 TAG PRINT S3/9/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 0726149/5 DISPLAY 0074483/AU,TI PRINT 0301964/9

FOR ONLINE HELP:

See HELP FIELDS 33 for searchable fields; HELP FORMAT 33 for output formats; HELP LIMIT 33 for limits; HELP RATES 33 for cost information; HELP SORT 33 for sorts.