

## COMPENDEX (Ei Compendex)

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- Subject Coverage**
- Civil and railroad engineering
  - Environmental and agricultural engineering
  - Geological and marine engineering
  - Mining and metallurgy
  - Chemical, petroleum, and fuel engineering
  - Bioengineering
  - Electrical engineering and electronics
  - Mechanical, automotive, and industrial engineering
  - Control devices and principles, instruments and measurement
  - Nuclear technology
  - Aerospace engineering
  - Heat and thermodynamics
  - Computers and data processing, communication engineering
  - Sounds and acoustical technology
  - Optics and optical devices
- 

**File Type** Bibliographic

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**Features**

|                                  |  |                       |                                     |
|----------------------------------|--|-----------------------|-------------------------------------|
| Thesaurus                        | Controlled Term (/CT), Controlled Term in German (/CTDE) |                       |                                     |
| <a href="#">Alerts (SDIs)</a>    | Weekly   |                       |                                     |
| CAS Registry Number® Identifiers | <input type="checkbox"/>                                 |                       |                                     |
| <a href="#">Keep &amp; Share</a> | <input checked="" type="checkbox"/>                      | <a href="#">SLART</a> | <input checked="" type="checkbox"/> |
| Learning Database                | <input type="checkbox"/>                                 | Structures            | <input type="checkbox"/>            |

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**Record Content**

- Bibliographic information, abstracts, and indexing

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**File Size**

- More than 26.5 million records (09/2023)

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**Coverage** 1970-present

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**Updates** Weekly

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**Language** English

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**Database Producer**

Elsevier (Engineering Information)  
 360 Park Avenue South  
 New York, NY 10010 USA  
 Phone: 212-633-3895  
 Fax: 212-633-3680  
 Email: [eicustomersupport@elsevier.com](mailto:eicustomersupport@elsevier.com)  
 Copyright Holder

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**Sources**

- Journals
  - Books
  - Reports
  - Conference contributions
  - Other non-conventional literature
- 

**User Aids**

- Online Helps (HELP DIRECTORY lists all help messages available)
  - Ei Thesaurus – Classification Code
  - STNGUIDE
- 

**Cluster**

- AEROTECH
- ALLBIB
- AUTHORS
- CHEMENG
- CHEMISTRY
- COMPUTER
- CONSTRUCTION
- CORPSOURCE
- ELECTRICAL
- ENGINEERING
- ENVIRONMENT
- FUELS
- GEOSCIENCE
- GOVREGS
- MATERIALS
- MEETINGS
- METALS
- NPS
- PETRLOEUM
- POLYMERS

STN Database Cluster information:

<https://www.cas.org/support/training/stn/database-clusters>

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## Search and Display Field Codes

Fields that allow left truncation are indicated by an asterisk (\*).

### General Search Fields

| Search Field Name   | Search Code   | Search Examples  | Display Codes   |
|---|---|--|---|
| Basic Index* (contains single words from title (TI), abstract (AB), classification code (text) (CC), controlled term (CT), and supplementary term (ST) fields)  | None<br>or<br>/BI                                       | S TURBOSHAFT ENGINE#<br>S DIGITAL(2W)CONTROL<br>S JET TURBINE#<br>S FEEDBACK/BI,CT<br>S ?LASER?  | AB, CC, CT,<br>ST, TI   |
| Abstract*<br>Accession Number<br>Author (editor)  | /AB<br>/AN<br>/AU                                       | S ?SYMMETRI?/AB<br>S 2008-4911759913/AN<br>S CHENEY PAUL H/AU<br>S CHENEY, PAUL H/AU<br>S HERMAN, ?/AU   | AB<br>AN<br>AU  |
| Author Identifier (ORCID)<br>Classification Code<br>(code and text) <b>(1)</b><br>Controlled Term <b>(4)</b>  | /AUID<br>/CC<br>/CT                                     | S 0000-0003-4999-9161/AUID<br>S (BRIDGES TUNNELS)/CC<br>S 538.1/CC<br>S MAN MACHINE SYSTEMS/CT<br>S *MOTOR TRANSPORTATION/CT<br>S (FAILURE ANALYSIS(S)AUTOMAT?)/CT<br>S MAGNETIC RESONANCE+NT/CT | AUID<br>CC<br>CT  |
| Controlled Term in German <b>(2)</b>  | /CTDE   | E AUSSENVERKLEIDUNG+ALL/CTDE<br>S FACINGS/CTDE   | CT  |
| Controlled Word<br>Country of Publication<br>(ISO code and text)<br>Corporate Source<br>(author affiliations, and e-mail addresses) <b>(1)</b>  | /CW<br>/CY<br>/CS                                       | S MOTOR TRUCK TERMINALS/CW<br>S US/CY<br>S (IBM(S)LOS(W)GATOS)/CS  | CT<br>CY<br>CS, EML   |
| Digital Object Identifier<br>Document Type<br>(STN code and text)<br>E-mail Address <b>(1)</b><br>Entry Date <b>(3)</b><br>Field Availability<br>International Standard<br>(Document) Number<br>(CODEN, ISBN, and ISSN) | /FTDOI<br>/DT<br>(or /TC)<br>/EML<br>/ED<br>/FA<br>/ISN | S 10.1007/S00253-023-12552-X/FTDOI<br>S REPORT/DT<br>S B/DT<br>S AMERICAN EDU/EML<br>S ED=20090109<br>S L10 AND AB/FA<br>S MACYAC/ISN<br>S 1212-4834/ISN<br>S 9197040843/ISN                     | SO<br>DT<br>CS, EML<br>ED<br>FA<br>ISN, SO                              |
| Journal Title (contains full and abbreviated journal titles)<br>Language (ISO code and text)<br>Meeting Date <b>(3)</b><br>Meeting Location<br>Meeting Number<br>Meeting Organizer <b>(1)</b><br>Meeting Title          | /JT<br>/LA<br>/MD<br>/ML<br>/MN<br>/MO<br>/MT           | S ACTA ASTRONAUTICA/JT<br>S J ACOUST SOC AM /JT<br>S FRENCH/LA<br>S 900425-900427/MD<br>S BRUSSELS/ML<br>S 13230/MN<br>S TECHNOLOGY GROUP/MO<br>S (ELECTRONIC MANUFACTURING AND SYMPOSIUM)/MT    | JT, JTA,<br>JTF, SO<br>LA<br>MD, SO<br>ML, SO<br>MN<br>MO, SO<br>MT, SO |
| Meeting Year <b>(3)</b><br>Number of Report   | /MY<br>/NR  | S 1990/MY<br>S AIAA 2005-818/NR  | MD, SO<br>NR  |

## COMPENDEX

## General Search Fields (cont'd)

| Search Field Name   | Search Code  | Search Examples  | Display Codes                                |
|---|--|--|--|
| Publication Date (3)<br>Publication Year (3)<br>Publisher (1)<br>Publisher Item Identifier<br>Reference Count   | /PD<br>/PY<br>/PB<br>/PUI<br>/REC<br>(or<br>/RE.CNT) | S JAN-FEB 2007/PD<br>S L2 AND 1981-1983/PY<br>S SPRINGER HEIDELBERG/PB<br>S 1011092002203496/PUI<br>S 8-10/REC                                   | PD, SO<br>PY, SO<br>PB, SO<br>PUI<br>REC, SO |
| Source (contains CODEN, DOI, journal title and other higher level titles, ISBN, ISSN, publisher, meeting information, meeting organizers and sponsors, number of report, URL) | /SO  | S TRANSP SCI/SO<br>S NATMA4/SO<br>S 0499-9320/SO<br>S 0-8031-0443-X/SO<br>S (REMOTE SENSING (S) VEGETATION)/SO<br>S 9728865201/SO<br>S PSISDG/SO | SO   |
| Summary Language (ISO code and text)  | /SL  | S GERMAN/SL<br>S DE/SL   | SL   |
| Supplementary Term Title*   | /ST<br>/TI   | S GADOLINIUM/ST<br>S LONGWALL MINING/TI<br>S (STOCKPILES(S)COKE OVEN)/TI<br>S ?ALLOCATION?/TI  | ST<br>TI                                     |
| Uniform Resource Locator<br>Update Date (3)<br>Word Count, Title  | /URL<br>/UP<br>/WC.T                                 | S ELSEVIER JOURNALS/URL<br>S UP=20090127<br>S 10-20/WC.T   | SO, URL<br>ED<br>WC.T                        |

(1) Search with implied (S) proximity is available in this field.

(2) EXPAND with German terms may be used in the /CTDE thesaurus field to identify the corresponding English thesaurus terms. Only English terms are indexed and thus searchable in the database. This search can be carried out in the /CTDE field.

(3) Numeric search field that may be searched using numeric operators or ranges.

(4) Major Controlled Terms preceded by and searched with a leading asterisk.

Property Fields<sup>1)</sup>

In COMPENDEX a numeric search for a specific set of physical properties (/PHP) is available within the abstract and title fields. The numeric values are not displayed as single fields, but highlighted within the hit displays.

Use EXPAND/PHP to search for all available physical properties. A search with the respective field codes will be carried out in the abstract and title fields. The /PHP index contains a complete list of codes and related text for all physical properties available for numeric search.

| Field Code | Property                                      | Unit                     | Search Examples                              |
|------------|---|--------------------------|--|
| /AOS       | Amount of substance                           | Mol                      | S 10/AOS                                     |
| /BIR       | Bit Rate                                      | Bit (Bit)                | S 100000-160000/BIR                          |
| /BIT       | Stored Information                            | Bit                      | S BIT > 3 MEGABIT (10A) STORAGE              |
| /CAP       | Capacitance                                   | Farad                    | S 1-10 MF/CAP                                |
| /CDN       | Current Density                               | Ampere/Square Meter      | S CDN>5 A/M**2                               |
| /CMOL      | Molarity (Concentration, amount of substance) | mol/l                    | S MOLYBD?/BI (S) 2/CMOL                      |
| /CON       | Conductance                                   | S (Siemens)              | S 1E-2/CON                                   |
| /DB        | Decibel                                       | Decibel                  | S DB>50                                      |
| /DEG       | Degree  | Degree                   | S (POLARI? (S) ANGLE)/BI (S) 45/DEG          |
| /DEN       | Density (Mass Density)                        | Kg/m3                    | S (METHOD? (S) COMPO?)/AB (S) 5E-3-10E-3/DEN |
| /DEQ       | Dose Equivalent                               | Sievert                  | S DEQ>0.5 (S) RADIATION                      |
| /DOS       | Dosage  | Milligram/Kilogram       | S DOS>0.8                                    |
| /DV        | Viscosity, dynamic                            | Pa * s (Pascal * second) | S DV>5000                                    |

Property Fields<sup>(1)</sup> (cont'd)

| Field Code  | Property   | Unit  | Search Examples  |
|---|--|---|--|
| /ECD<br>/ECH<br>/ECO  | Electric Charge<br>Electric Charge<br>Electrical Conductivity  | Coulomb/Square Meter<br>Coulomb<br>Siemens/Meter  | S 1-20 /ECD.EX (XA) ELECTRICAL<br>S 15/ECH<br>S ECO>5000 (XA) GEOTHERMAL EFFECTS   |
| /ELC<br>/ELF<br>/ENE<br>/ERE<br>/FOR<br>/FRE<br>/IU<br>/KV<br>/LEN (or /SIZ)<br>/LUME | Electric Current<br>Electric Field<br>Energy<br>Electrical Resistivity<br>Force<br>Frequency<br>International Unit<br>Viscosity, kinematic<br>Length<br>Luminous | Ampere<br>Volt/Meter<br>J (Joule)<br>Ohm * Meter<br>N (Newton)<br>Hz (Hertz)<br>none<br>m <sup>2</sup> /s<br>Meter<br>Lux | S 1-10/ELC<br>S 1-10/ELF<br>S NUTRIENTS AND 100/ENE<br>S ERE>10<br>S 50 N/FOR<br>S ANALY?/AB (10A) 0-3/FRE<br>S IU>100 (P) INTERFERON<br>S LUBRICANT/BI (S) 10E-5/KV<br>S 1-4/LEN<br>S 10-50/LUME    |
| /LUMF   | Emittance/Illuminance<br>Luminous Flux<br>(Luminous Power)   | Lumen   | S FLUID (P) LUMF>3   |
| /LUMI<br>/M<br>/MCH<br>/MFD (or /MFS)   | Luminous Intensity<br>Mass<br>Mass to Charge Ratio<br>Magnetic Flux Density  | Candela<br>Kg (Kilogram)<br>none<br>Tesla   | S 5<LUMI<15<br>S ALLOY/BI (30A) 1E-10-1E-5/M<br>S MCH=3<br>S MFD>0E-3(S)MAGNETIC RESONANCE   |
| /MFR (or /MFL)<br>/MM<br>/MOLS<br>/MVR  | Mass Flow Rate<br>Molar Mass<br>Molality of Substance<br>Melt Volume Rate,<br>Melt Flow Rate   | Kilogram/Second<br>g/mol<br>mol/kg<br>none  | S MFR>1.2<br>S 2000-3000 G/MOL/MM<br>S 01.-10 mol/kg/MOLS<br>S 5-10/MVR  |
| /NUC<br>/PER  | Nutrition Content<br>Percent (Proportionality)   | none<br>Percent   | S NUC<100 (XW) NUTRIENT<br>S (TITAN? (3A) DIOXID?)/AB (S) 53/PER   |
| /PERA<br>/PHV<br>/POW   | Permittivity, Absolute<br>pH<br>Power  | Farad/Meter<br>pH<br>W (Watt)   | S 1-10/PERA (S) BUFFER<br>S 7.4-7.6/PHV<br>S (SOLAR? OR PHOTOVOLTAIC?)/BI (10A) 5-10/POW   |
| /PRES (or /P)   | Pressure   | Pa (Pascal)   | S (VACUUM (5A) DISTILL?)/BI (S) 1000-1100/PRES<br>S RAD>100<br>S VOLTAGE/AB (P) 1-10/RES   |
| /RAD<br>/RES  | Radioactivity<br>Electrical  | Bq (Becquerel)<br>Ohm   | S RAD>100<br>S VOLTAGE/AB (P) 1-10/RES   |
| /RSP<br>/SAR  | Impedance/resistance<br>Rotational Speed<br>Area /Surface Area   | Revolution/Minute<br>m <sup>2</sup>   | S 5000-8000/RSP AND PARAFFIN<br>S (COATING? OR FOIL?)/BI (S) 10-100/SAR  |
| /SOL<br>/STSC<br>/TCO<br>/TEMP (or /T)  | Solubility<br>Surface Tension<br>Thermal Conductivity<br>Temperature   | Gram/100 gram<br>J/m <sup>2</sup><br>K (Kelvin)<br>K (Kelvin)   | S SOL>20 (10W) WATER<br>S 60 J/M**2 /STSC<br>S 2-17/TCO (S) THERM?<br>S (STABILITY (25A) VITAMIN?) (S) 10/TEMP   |
| /TIM<br>/VEL (or /V)<br>/VELA<br>/VLR<br>/VOL<br>/VOLT                                | Time<br>Velocity<br>Velocity, angular<br>Volumetric Flow Rate<br>Volume<br>Voltage   | S (Second)<br>m/s (Metre per Second)<br>rpm<br>Cubic Meter/Second<br>m <sup>3</sup><br>V (Volt)                           | S CONDUCT?/AB (10W) 0-1/TIM<br>S EVOL?/BI AND 2E-4-5E-4/VEL<br>S VISCO?/AB (S) VELA<350<br>S 1-10/VLR (XA) VARIABILITY<br>S ?EFFECT?/BI (15A) 1E-8-2E-8 /VOL<br>S APPLICATION/BI(10A) 5E-3<VOLT<7E-3 |

(1) Exponential format is recommended for the search of particularly high or low values, e.g., 1.8E+7 or 1.8E7 (for 18000000) or 9.2E-8 (for 0.00000092).

## THESAURUS FIELDS

The Engineering Index Thesaurus is available online in fields /CT (Controlled Term) and /CTDE (Controlled Term in German) (German-English Edition).

All Relationship Codes can be used with both the SEARCH and EXPAND command.

| Code     | Content  | Examples  |
|----------|--|---|
| ALL      | All Associated Terms<br>(BT, SELF, DA, NOTE, USE, USE+, NEW, UF, UF+, OLD, NT, RT, CC) | E SATELLITES+ALL/CT<br>E BESCHICHTUNGEN+ALL/CTDE<br>S COATINGS+ALL/CTDE<br>S FLARE STACKS+AUTO/CT |
| AUTO (1) | Automatic Relationship<br>(SELF, USE, USE+, NEW, UF, UF+, OLD)                         |   |
| BT       | Broader Terms<br>(BT, SELF)  | E JUTE FASERN+BT/CTDE<br>S JUTE FIBERS+BT/CTDE  |
| HIE      | Hierarchy (all Broader and Narrower Terms)<br>(BT, SELF, NT)                           | E MAGNETIC DEVICES+HIE/CT   |
| NOTE     | Term with date and scope note<br>(SELF, DA, NOTE)                                      | E RAILS+NOTE/CT   |
| NT       | Narrower Terms (SELF, NT)  | S RAILROAD TRACKS+NT/CT   |
| RT       | Related Terms (SELF, RT)   | E SATELLITES+RT/CT  |
| UF       | Preferred and Forbidden Terms<br>(SELF, UF, UF+, OLD)                                  | E MAGNETIC DISK STORAGE+UF/CT   |
| USE      | Forbidden and Preferred Terms<br>(SELF, USE, USE+, NEW)                                | S PARKWAYS+USE/CT   |

(1) Automatic Relationship is SET OFF. In case of SET REL ON, the result of EXPAND or SEARCH without any relationship code is the same as described for AUTO.

## DISPLAY and PRINT Formats

Any combination of formats may be used to display or print answers. Multiple codes must be separated by spaces or commas, e.g., D L1 1-5 TI AU. The fields are displayed or printed in the order requested.

Hit-term highlighting is available for all fields except AU and CS. Highlighting must be ON during SEARCH to use the HIT, KWIC, and OCC formats.

| Format                         | Content   | Examples     |
|--------------------------------|---|--------------|
| AB                             | Abstract  | D TI AB      |
| AN                             | Accession Number  | D 1-5 AN     |
| AU                             | Author  | D AU TI      |
| AUID (1)                       | Author Identifier (ORCID)   | D AUID       |
| CC                             | Classification Code   | D CC CT      |
| CS                             | Corporate Source (author affiliations, and e-mail addresses)          | D CS         |
| CT                             | Controlled Term   | D CT CC      |
| CY                             | Country of Publication  | D CY         |
| DT (TC)                        | Document Type   | D DT         |
| ED (UP)                        | Entry Date  | D ED         |
| EML (1)                        | E-mail Address  | D EML        |
| FTDOI                          | Digital Object Identifier   | D FTDOI      |
| ISN (1)                        | International Standard (Document) Number                              | D ISN        |
| JT (1)                         | Journal Title   | D JT         |
| JTA (1)                        | Journal Title, Abbreviated  | D JTA        |
| JTF (1)                        | Journal Title, Full   | D JTF        |
| LA                             | Language  | D LA         |
| MD                             | Meeting Date  | D MD         |
| ML                             | Meeting Location  | D ML         |
| MN                             | Meeting Number  | D MN         |
| MO                             | Meeting Organizer   | D MO         |
| MT                             | Meeting Title   | D MT         |
| NR                             | Number of Report  | D NR         |
| PD (1)                         | Publication Date  | D PD         |
| PB (1)                         | Publisher   | D PB         |
| PUI                            | Publisher Item Identifier   | D PUI        |
| PY (1)                         | Publication Year  | D PY         |
| REC (RE.CNT) (1)               | Reference Count   | D REC        |
| SL                             | Summary Language  | D SL         |
| SO                             | Source  | D SO         |
| ST                             | Supplementary Term  | D CT ST 5-15 |
| TI                             | Title   | D TI 1-10    |
| UP                             | Update Date   | D UP         |
| URL (1)                        | Uniform Resource Locator  | D URL        |
| WC.T (1)                       | Word Count, Title   | D WC.T       |
| ABS                            | AN, AB  | D ABS        |
| ALL                            | BIB, AB, CC, CT, ST   | D 1-3 ALL    |
| DALL                           | ALL, delimited for post processing                                    | D DALL       |
| IALL                           | ALL, indented with text labels  | D IALL       |
| ALLO                           | AN, TI, AU, MT, MO, ML, MD, SO, PY, MN, DT, LA, AB, CC, CT, ST        |              |
| BIB                            | AN, TI, AU, CS, NR, SO, PUI, CY, DT, LA, SL, ED<br>(BIB is default)   | D BIB        |
| IBIB                           | BIB, indented with text labels  | D IBIB       |
| IND                            | AN, CC, CT, ST  | D IND        |
| MAX                            | ALL, including AUID   | D MAX        |
| SCAN (2)                       | TI, CT (random display without answer numbers)                        | D SCAN       |
| TRIAL (TRI, SAMPLE, SAM, FREE) | TI, CC, CT, ST  | D TRI        |
| HIT                            | Hit term(s) and field(s)  | D HIT        |
| KWIC                           | Up to 50 words before and after hit term(s) (KeyWord-In-Context)      | D KWIC       |
| OCC                            | Number of occurrences of hit term(s) and field(s) in which they occur | D OCC        |

(1) Custom display only.

(2) SCAN must be specified on the command line, i.e., D SCAN or DISPLAY SCAN.

**COMPENDEX****SELECT, ANALYZE, and SORT Fields**

The SELECT command is used to create E-numbers containing terms taken from the specified field in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphabetic or numeric order of the specified field(s).

| Field Name  | Field Code   | ANALYZE/<br>SELECT (1) | SORT |
|---|--------------|------------------------|------|
| Abstract  | AB           | Y                      | N    |
| Accession Number  | AN           | Y                      | N    |
| Author  | AU           | Y (3)                  | Y    |
| Author Identifier (ORCID)                                   | AUID         | Y                      | Y    |
| Citation  | CIT (RE)     | Y (2,3)                | N    |
| Classification Code   | CC           | Y                      | Y    |
| CODEN   | CODEN        | N                      | Y    |
| Controlled Term   | CT           | Y                      | N    |
| Corporate Source (author affiliations, and email addresses) | CS           | Y (3)                  | Y    |
| Country of Publication                                      | CY           | Y                      | Y    |
| Document Type   | DT (TC)      | Y                      | Y    |
| E-mail Address  | EML          | Y                      | Y    |
| Entry Date  | ED (UP)      | Y                      | Y    |
| International Standard Book Number                          | ISBN         | N                      | Y    |
| International Standard (Document) Number                    | ISN          | Y (4)                  | Y    |
| International Standard Serial Number                        | ISSN         | N                      | Y    |
| Journal Title   | JT           | Y                      | Y    |
| Journal Title, Abbreviated                                  | JTA          | Y                      | Y    |
| Journal Title, Full   | JTF          | Y                      | Y    |
| Language  | LA           | Y                      | Y    |
| Meeting Date  | MD           | Y                      | Y    |
| Meeting Location  | ML           | Y                      | Y    |
| Meeting Number  | MN           | Y                      | Y    |
| Meeting Organizer   | MO           | Y                      | Y    |
| Meeting Title   | MT           | Y                      | Y    |
| Number of Report  | NR           | Y                      | Y    |
| Occurrence Count of Hit Terms                               | OCC          | N                      | Y    |
| Publication Date  | PD           | Y (3)                  | Y    |
| Publisher   | PB           | Y                      | Y    |
| Publisher Item Identifier                                   | PUI          | Y                      | Y    |
| Publication Year  | PY           | Y (3)                  | Y    |
| Reference Count   | REC (RE.CNT) | Y                      | Y    |
| Source  | SO           | Y (5)                  | N    |
| Summary Language  | SL           | Y                      | Y    |
| Supplementary Term  | ST           | Y                      | N    |
| Title   | TI           | Y (default)            | Y    |
| Update Date   | UP           | Y                      | Y    |
| Uniform Resource Locator                                    | URL          | Y                      | Y    |
| Word Count, Title   | WC.T         | Y                      | Y    |

- (1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT TI.
- (2) SELECT CIT or ANALYZE CIT allows you to extract the reference from the source documents in this database and have them automatically converted to a citation format for searching in SCISEARCH. SEL CIT selects first author, publication year, volume, first page, and a truncation symbol with /RE appended to the terms created by SELECT.
- (3) SELECT HIT and ANALYZE HIT are not valid with this field.
- (4) Selects or analyzes CODEN, ISBN, and ISSN with /ISN appended to the terms created by SELECT.
- (5) Selects or analyzes CODEN, ISBN, and ISSN with /SO appended to the terms created by SELECT.



## Sample Records

### DISPLAY BIB OF CONFERENCE

AN 2023-2014106797 COMPENDEX  
 TI Research on 3D model and terrain matching method based on the segment of linear coordinates  
 AU Yang Kelong(1); Huo Liang(1,2); Shen Tao(1,3); Geng Mingzhu(1); Li Miaolin(1); Zhang Xiaoyong(3)  
 Correspondence(s): Shen Tao(1)  
 CS (1)School of Geomatics and Urban Spatial Information, Beijing University of Civil Engineering and Architecture, Beijing, China, 100044  
 (2)Key Laboratory of Urban Spatial Information, Ministry of Natural Resources, Beijing, China, 102616  
 (3)Chinese Academy of Fishery Sciences, Beijing, China, 100141  
 EMAIL: klong\_y@163.com; huoliang@bucea.edu.cn; shentao@bucea.edu.cn; 2108160220004@stu.bucea.edu.cn; lml18845637125@163.com; zhangxiaoyong@cafs.ac.cn  
 SO Fourth International Conference on Geoscience and Remote Sensing Mapping, GRSM 2022; Proceedings of SPIE - The International Society for Optical Engineering (2023), Volume 12551, arn: 1255110, 11 refs.  
 Editor(s): Lohani Tarun Kumar  
 ISSN: 0277-786X E-ISSN: 1996-756X ISBN: 9781510662162  
 DOI: 10.1117/12.2668185  
 Published by: SPIE  
 Conference: 4th International Conference on Geoscience and Remote Sensing Mapping, GRSM 2022, Changchun, China, 4 Nov 2022 - 6 Nov 2022  
 Organizer(s): Academic Exchange Information Centre (AEIC)  
 URL (Document): <https://www.spiedigitallibrary.org/conference-proceedings-of-spie>  
 CY United States  
 DT Conference; (Conference Paper)  
 LA English  
 SL English  
 ED Entered STN: 22 May 2023  
 Last updated on STN: 22 May 2023

### DISPLAY ALL OF JOURNAL

AN 2023-2014098891 COMPENDEX  
 TI The green approach of ZnO NPs and its Antioxidant, hemolytic, and photocatalytic activity and functionalized r-GO-ZnO for energy storage application  
 AU Meena Jayaprakash(1,2); Kumar Annamalai Senthil(1,2); Santhakumar K.(1); Pavithra G.(2); Anusha Dinakaran(2)  
 Correspondence(s): Santhakumar K.(1)  
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 SO Journal of Materials Science: Materials in Electronics (1 May 2023), Volume 34, Number 14, arn: 1131, 58 refs.  
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 CY United States  
 DT Journal; Article  
 LA English  
 SL English

**COMPENDEX**

- ED Entered STN: 22 May 2023  
Last updated on STN: 22 May 2023
- AB The present paper describes the green synthesis of Zinc oxide nanoparticles (ZnO NPs) from the flowers of *L. nepetifolia*. Zinc oxide nanoparticles have gained more interest from researchers due to their wide applications from biological activity to energy storage system. The synthesis of ZnO nanoparticles and examined by using Ultraviolet-visible spectroscopy, Fourier Transform-Infrared spectroscopy, X-ray Diffraction analysis, Dynamic Light Scattering analysis, Raman spectroscopy, Scanning Electron Microscopy and Energy Dispersive X-ray spectroscopy, BET, XPS, Transmission Electron Microscopy, and Thermogravimetric Analysis. The photocatalytic studies were followed using methylene blue (MB) dye by ZnO nanoparticles by using sunlight as a source. The degradation of MB dye is found to be 90% within 70 min. Then the synthesized ZnO nanoparticles help to evaluate the antioxidant activities against Nitric oxide, Hydrogen peroxide, and DPPH free radicals. Moreover, the synthesized ZnO NPs show good biocompatibility nature, and the electrochemical analysis of reduced Graphene Oxide with Zinc oxide (rGO-ZnO) nanocomposite shows that the prepared rGO-ZnO nanocomposite has a high specific capacitance of about 667 F gsup-1 in comparison with the pure Zinc oxide nanoparticles (200 F gsup-1) and has good cycling stability over 1000 cycles.
- CC 461.6 Medicine and Pharmacology; 461.9.1 Immunology; 525.7 Energy Storage; 712.1 Semiconducting Materials; 741.3 Optical Devices and Systems; 761 Nanotechnology; 801 Chemistry; 801.4 Physical Chemistry; 802.2 Chemical Reactions; 803 Chemical Agents and Basic Industrial Chemicals; 804 Chemical Products Generally; 804.1 Organic Compounds; 804.2 Inorganic Compounds
- CT \*High resolution transmission electron microscopy; Antioxidants; Aromatic compounds; Bioactivity; Biocompatibility; Energy storage; Fourier transform infrared spectroscopy; Free radicals; Graphene; II-VI semiconductors; Metal nanoparticles; Nitric oxide; Photocatalytic activity; Scanning electron microscopy; Spectrum analysis; Synthesis (chemical); Thermogravimetric analysis; X ray powder diffraction; ZnO nanoparticles
- ST Antioxidant activities; Functionalized; Hemolytic activity; Methylene blue dye; Photocatalytic activities; Reduced graphene oxides; Synthesised; Zinc oxide nanocomposites; Zinc oxide nanoparticles; ZnO nanoparticles

**DISPLAY MAX**

- AN 2020-0508105270 COMPENDEX
- TI Exploring Disordered Morphologies of Blends and Block Copolymers for Light-Emitting Diodes with Mesoscopic Simulations
- AU Zhang Jianrui(1); Kremer Kurt(1); Michels Jasper J.(1); Daoulas Kostas Ch.(1)  
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- SO Macromolecules (2020), 117 refs.  
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DOI: 10.1021/acs.macromol.9b02402  
Published by: American Chemical Society  
URL (Document): <http://pubs.acs.org/journal/mamobx>

CY United States  
 DT Journal; Article  
 LA English  
 SL English  
 ED Entered STN: 3 Feb 2020  
 Last updated on STN: 3 Feb 2020  
 AB Recently, disordered blends of semiconducting and insulating polymers have been used to prepare light-emitting diodes with increased luminous efficiency. Because the thermodynamic stability of the disordered phase in blends is limited, equivalent diblock copolymers (BCPs) could be an alternative. However, the choice between disordered blends and BCPs requires understanding structural differences and their effect on charge carrier transport. Using a hybrid mesoscopic model, we simulate blends and equivalent BCPs of two representative semiconducting and insulating polymers: poly(p-phenylene vinylene) (PPV) and polyacrylate. The immiscibility is varied to mimic annealing at different temperatures. We find stable or metastable disordered morphologies until we reach the mean-field (MF) spinodal. Disordered morphologies are heterogeneous because of thermal fluctuations and local segregation. Near the MF spinodal, segregation is stronger in BCPs than in the blends, even though the immiscibility, normalized by the MF spinodal, is the same. We link the spatial distribution of PPV with electric conductance. We predict that the immiscibility (temperature at which the layer is annealed) affects electrical percolation much stronger in BCPs than in blends. Differences in the local structure and percolation between blends and BCPs are enhanced at a high insulator content.  
 CC 413 Insulating Materials; 641.1 Thermodynamics; 701.1 Electricity, Basic Concepts and Phenomena; 708.3 Superconducting Materials; 712.1 Semiconducting Materials; 714.2 Semiconductor Devices and Integrated Circuits; 803 Chemical Agents and Basic Industrial Chemicals; 815.1 Polymeric Materials  
 CT \*Light emitting diodes; Block copolymers; Carrier transport; Insulating materials; Semiconducting polymers; Solvents; Superconducting materials; Thermodynamic stability  
 ST Electrical percolation; Insulating polymer; Luminous efficiency; Mesoscopic modelling; Mesoscopic simulation; Poly-p-phenylenevinylene; Structural differences; Thermal fluctuations

### => E RAILROAD TRACKS+ALL/CT

|                 |      |     |   |
|-----------------|------|-----|---|
| E1              | 1261 | BT2 | Facilities/CT                                     |
| E2              | 6379 | BT2 | Railroads/CT                                      |
| E3              | 3341 | BT1 | Railroad plant and structures/CT                  |
| E4              | 3439 | --> | Railroad tracks/CT                                |
|                 |      | DA  | January 1993                                      |
| E5              | 0    | UF  | Tracks (railroad)/CT                              |
| E6              | 301  | OLD | Railroad plant and structures:Track/CT            |
| E7              | 38   | OLD | Railroad plant and structures:Track inspection/CT |
| E8              | 102  | NT1 | Railroad ties/CT                                  |
| E9              | 66   | NT1 | Railroad track switches/CT                        |
| E10             | 348  | RT  | Ballast (railroad track)/CT                       |
| E11             | 270  | RT  | Rail laying/CT                                    |
| E12             | 3691 | RT  | Rails/CT  |
| E13             | 55   | RT  | Track test cars/CT                                |
| E14             | 0    | CC  | 681.1/CT  |
| ***** END ***** |      |     |   |

## COMPENDEX

## =&gt; E AUSSENVERKLEIDUNG+ALL/CTDE

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E1      4939   BT3   EN Structures (built objects)/CTDE
E2      0      DE   Bauwerke (erbaute Objekte)/CTDE
E3      30967  BT2   EN Buildings/CTDE
E4      0      DE   Gebaeude/CTDE
E5      422    BT1   EN Building components/CTDE
E6      0      DE   Gebaedeteile/CTDE
E7      212    EN   Facings/CTDE
E8      0      -->  DE Aussenverkleidung/CTDE
          DA   EN January 1993
          DE   Januar 1993
E9      63     OLD   EN Buildings:Facings/CTDE
E10     603    RT    EN Facades/CTDE
E11     0      DE   Fassaden/CTDE
E12     142    RT    EN Revetments/CTDE
E13     0      DE   Verkleidungen/CTDE
E14     401    RT    EN Veneers/CTDE
E15     0      DE   Furniere/CTDE
E16     0      CC    EN 402/CTDE
E17     0      CC    EN 408.2/CTDE
*****  END  *****

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