



Trade Science Inc.

# Materials Science

An Indian Journal

Guidelines for publication

(Revised January 2012)

## 1. SCOPE AND POLICY

The *Materials Science : An Indian Journal* is devoted to the rapid publication of fundamental research at the interface of chemistry, chemical engineering and materials science. The journal publishes theoretical and experimental studies focus on the preparation or understanding unusual or useful properties of materials. Topics include: catalytic materials, biomaterials, chemical vapor deposition, coatings, clusters and colloids, composites, fluids and liquid crystals, glasses, inorganic solids/ceramics, inorganic/ organic network, magnetic materials, metals, molecular crystals, microstructure, optical materials, phase transitions, polymeric materials, precursor routes to materials, self-assembled materials, sensors, sol-gel, semi-conductors, super-conductors, surface and interfacial phenomena, thin films and monolayers, porous material, NLO materials. All contributions shall be rigorously refereed and selected on the basis of quality and originality of the work as well as the breadth of interest to readers. The journal publishes the most significant new research in all phases of materials chemistry being done in the world oday, thus ensuring its scientific priority.

The *Materials Science : An Indian Journal* will not accept mailed hardcopy manuscripts. Manuscripts submitted by e-mail cannot be accepted.

Authors should take this into account that manuscripts submitted to the *Materials Science : An Indian Journal* must be original and unpublished (including in conference proceeding in electronic conferences or on web sites) and must not be under simultaneous consideration by another journal.

Manuscripts will be published in the WWW edition after completing all formalities. Authors should consider this when planning intellectual and patent activities related to the research work. Web publication date is illustrated at the first page of the manuscript in the printed issue.

Manuscript will be sent for review only when author will provide a signed Copyright Transfer Agreement (CTA). The CTA form assigned with manuscript number, received date, authors names and manuscript title will be provided to corresponding author by Editorial Office. Signatures of author and all co-authors are necessary in CTA form. The signed CTA form should be faxed or sent by post to the Editorial Office. If manuscript is not accepted for publication or is withdrawn by the author,

the transfer of the copyright to the TSI is automatically cancelled.

Manuscripts, original of illustrations and proofs will be destroyed 3 months after publication.

## 2. TYPES OF CONTRIBUTIONS

Manuscripts submitted to the *Materials Science : An Indian Journal* should be *Short Communication, Full Paper, Review, Feature Article*.

**1. Short Communication:** *Short Communication* is a report of unusual urgency, significance and interest originating in all areas of materials chemistry. A statement from authors describing why communication meets these criteria is required. *Short Communication* is restricted to 2000 words or 3 journal pages. This limit will be strictly followed. The text should be broken into sections however, an introductory paragraph should provide a general context of the work explaining its significance and indicating why it should be of interest to chemists in other areas while the end paragraph should summarize the major conclusions that can be drawn pointing to possible future directions.

**2. Review :** *Review* introduces the reader to a particular area of an author's research through a concise overview of a selected topic. The content should balance scope with depth, it should be a focused review of 9-10 journal pages. A passport-type photo and a short summary of the career to-date of corresponding author should be included. Reference to important work from others that is significant to the topic should be included. Review will no have "Experimental" section.

**3. Full Paper :** *Full Paper* must either be of a current general interest or of great significance to a more specialized readership. It is peer reviewed and report details of studies that have not been published previously, except in the form of primary communications. Manuscript should be derived into sections including "Experimental". There are no restriction placed on the length of a *Full Paper*.

**4. Feature Article :** It is concise description of recent research development written by the scientists, personal responsible for much of the research described. It not only gives an overview of work published to-date but may also contain new, previously unpublished results. Through this article the non-specialist will gain an appreciation of the importance of the work and a starting point

in the specialist literature. A passport type photo and a short summary of the carrier to-date of the corresponding author should be included, as well as a short abstract and 5-6 keywords.

**A modular version of these guidelines is available as separate PDF file on the internet at <http://www.tsijournals.com/msaj>**

### 3. SUBMISSION OF CONTRIBUTIONS

The '*Materials Science : An Indian Journal*' accepts manuscripts only via **Indian S Press** (TSI's Secure Online Manuscript Submission System). So contributors are requested not to send their manuscripts in form of mailed hardcopy or e-mail attachment, are not accepted. Only in unusual circumstances and Editor-in Chief.s approval mailed hardcopy manuscript be processed.

Corresponding author or designee must be able to provide manuscript as complete word-processor and PDF files including text, tables, graphics for online submission. Any help regarding online submission will provide at [tsijournals@tsijournals.com](mailto:tsijournals@tsijournals.com).

Corresponding author or designee has to be registered for submitting manuscripts to any TSI journal via **Indian S Press**. After registration corresponding author will be able to check status of submitted manuscript.

Author must fulfill formatting requirements mentioned in '*PREPARATION OF MANUSCRIPT AND SUPPLEMENTARY INFORMATION*' during submission, if missing, author will be given maximum 15 days to furnish the requested material, if failed manuscript will be inactivated. Same conditions will apply during revision process. An inactivated manuscript will be reactivated on author's request will be assigned a new 'Received Date' and they will have to provide another signed CTA.

An author has to provide following items during submission:

**A. Manuscript :** The author should submit complete manuscript including text, tables, graphics in both wordprocessor and PDF files.

**B. Cover Letter :** A cover letter must be uploaded with every manuscript in PDF format at the same as manuscript uploaded. The cover letter should contain,

- a. The corresponding author's name, postal and e-mail addresses, telephone and fax numbers.
- b. The title of the manuscript and a brief paragraph explaining significance of the work.
- c. Type of manuscript.
- d. Statement and particular submitted manuscript must be original and unpublished (including in conference proceeding in electronic conferences or on web sites) and must not be under simultaneous consideration by another journal.
- e. The names, institutional affiliations, and postal and e-

mail addresses of 5 or more qualified reviewers.

When authors cite unpublished information of other researchers who are not co-authors, copies of letters or email message of permission should be attached. A manuscript containing copyrighted information must be accompanied by copyright holder permission to reproduce it, no need when information is from TSI journal.

**C. Supplementary Information :** Supplementary Information files are uploaded at the same time as the manuscript. Instructions of preparation of Supplementary Information are discussed in '*PREPARATION OF MANUSCRIPT AND SUPPLEMENTARY INFORMATION*'.

#### Revising The Manuscript

In revising the manuscript, author should address any technical concerns raised by editor or reviewer, changes to the manuscript and the Supplementary Information according to editor's or reviewer's report should be mentioned in a new cover letter. During revision, author should check correct spelling, consistent notation and references. If the revision request manuscript is not returned within 30 days to Editor, manuscript will be inactivated.

The revised manuscript must be uploaded as revised submission not as a new manuscript. New or replacement Supplementary Information files can be added during revision. If there are any changes to any previously uploaded files, the author should explain the changes in the coverletter.

#### Additions & Corrections

If, errors or omissions of any information are found in a published paper, the corresponding author should contact the Editor-in-Chief for instruction on submitting and addition or correction. Acceptance of an addition or correction is subject to approval by the Editor-in-Chief.

### 4. PREPARATION OF MANUSCRIPT AND SUPPLEMENTARY INFORMATION

#### Manuscript Organization

The sections of a manuscript are (i) Title, (ii) Authors and Addresses, (iii) Corresponding Author's E-mail Address, (iv) Abstract, (v) Keywords, (vi) Introduction, (vii) Experimental, (viii) Results and Discussion (may be separate), (ix) Conclusions (optional), (x) Acknowledgment (optional), (xi) Supplementary Information available paragraph, (xii) References and Footnotes (xiii) TOC graphics with short description

**i. Title:** The title should be accurately, clearly and grammatically correct and concisely reflect emphasis and content of the manuscript. The wording of the title is important for correct-awareness alerting and for information retrieval. Words should be chosen carefully to provide information on the content and to function as indenting terms. Abbreviations should be avoided. It should be typed with a word all in bold face capitals, double spaced, center of

the width of the first page.

**ii. Authors and Addresses:** Authors' names include all those who have made substantial contributions to the works even in the manuscript was actually written by only one person use first name, middle name and surnames. At least one author must be designated with an asterisk (\*) as the author to whom correspondences should be addressed. The names and addresses of the institution(s) where the work was performed should be listed in the following paragraph. If this is different from the present address, this should be noted in footnote.

**iii. Corresponding Author's E-mail Address:** The email address of the corresponding author should be placed on a separate line below the institution addresses. If the corresponding author is no longer at the institution where the work was performed, the first footnote, marked with an asterisk(\*) should be that author's current address.

**iv. Abstract:** Abstract is used directly for abstraction in various abstraction services. This should state concisely the scope of the work and the principal findings no more than 200 words.

**v. Keywords:** 5-6 keywords should be provided directly below the abstract.

**vi. Introduction:** The introduction should be placed the work in the appropriate context and clearly state the purpose and objectives of the research. An extensive review of prior work is not appropriate and documentation of the relevant background literature should be selective rather than exhaustive particularly if reviews can be cited.

**vii. Experimental:** It is necessary to note types of instruments used for obtaining physicochemical characteristics of compounds; either the sources of the nontrivial reagents used should be specified or references for their synthesis should be given. Procedures used for the additional treatment of reagents and solvents should be described or references to corresponding publications should be provided in the Supplementary Information.

Sources of stationary phases for chromatography and supports for solid-phase synthesis may be identified. Sources of reactants, reagents, and solvents available from major laboratory chemical and biochemical supply firms should not be identified except in the case of starting compounds that are unused or not widely available or when the author has evidence that the use of material from a particular source is critical to the outcome of an experiment. Commercial and institutional providers of analytical services should not be named.

This section should include information about all the experimental work conducted, including a brief description of relevant preliminary work. The choice of any optimization procedure must be justified and figure of merit clearly stated. If appropriate this section should include information on how any new method was validated, in-

cluding a description of the statistical procedures used. Descriptions of methods should be supported by experimental results showing accuracy, precision, sensitivity and selectivity. Experimental procedure should be concise; there is no need to give detailed descriptions of well-known operations.

All elemental analytical data will be published. In molecular formulas, elements should be arranged according to the Chemical Abstracts System; C,H, and then all other elements in alphabetical order. Formulas of molecular adducts and onium salts are given with raised dots, e.g.  $C_5H_{10}N_2 \cdot 2HCl$ . The mass of a reagent introduced into a reaction is accompanied by its molar quantity e.g. 2-aminopyridine(0.094g, 1mmol).

Physical constants and spectral characteristics should be tabulated. For separate compounds these data are presented in the Experimental according to the following format

- m.p. 14-15°C(from pentane)
- b.p. 122-123°C/10mm Hg
- UV (ethanol) :  $\lambda_{max}(\epsilon)$  : 250nm (631)
- IR(KBr)  $\nu_{cm^{-1}}$  : 1650 (C=N), 3200-3440 (O-H)
- $^1H$ NMR (TMS)  $\delta$  ppm: 8.02-7.51(m, 9H, phenyl)

If the standard in  $^1H$  and  $^{13}C$  NMR is not TMS, the chemical shift of the standard used (in  $\delta$  scale) should be noted. Protons in the complex groups, to which signal relates, should be underlined below. Chemical shifts in the NMR  $^1H$  and  $^{13}C$  with the frequency below 400MHz should be given with an accuracy to one tenths and hundredths.

Mass spectra should be presented as numerical m/z values and relative ion currents either as plain text or as a table. The Ionization method used, ionization energy, mass numbers of characteristic ions, genesis of these ions and the intensity with respect to the major ion should be given.

When flash chromatography is used for product purification, both the support and solvent should be identified. Details such as size or type of glassware, and numbers and volumes of extraction and wash solvents, should not be included unless they are critical to the outcome of an experiment.

Experimental procedures describing the use of microwave irradiation must be accompanied by a description in the Supplementary Information that provides, the manufacturer and model of the microwave reactor, the temperature of the reaction mixture and the method of measurement and the reaction time specified as total irradiation time or as ramp time and hold time at the final temperature.

**Abbreviations :** Standard physicochemical methods and related terms as well as common reagents are designated by generally accepted English abbreviations. All nontrivial terms and abbreviations must be explained when mentioned for the first time. The following common abbreviations

viations should be used:

µg-microgram; mg-milligram; g-gram; nm-nanometer; µm-micrometer; mm-millimeter; cm-centimeter; ml-milliliter; °C-degree centigrade; K-kelvin scale; J-joule; kJ-kilo joule; A-ampere; mA-milliampere; V-Volt; mVmillivolt; Hzhertz; MHz-megahertz; W-watt; mol-mole; mmol -milli mole; mol/l-molar concentration; 1N-one-normal (solution); M-molecular mass; eq.-equivalent; m.p.-melting point; b.p.-boiling point; h-hour; min-minute; s-second.

Abbreviations of words secondary and tertiary should be written before names as sec- and tert- while before formulas as s- and t-. Abbreviations of prefixes ortho-, meta-, para- etc. should be written as o-, m-, p-. For solvents following abbreviations may be used

AcOH-acetic acid; Ac<sub>2</sub>O-acetic anhydride; AcOEt/EtOAc-ethyl acetate; BuOH-butyl alcohol; s-BuOH-sec-butyl alcohol; t-BuOH-tert-butyl alcohol; DMF-N,N-dimethyl formamide; DMSO-dimethyl sulfoxide; EtOH-ethyl alcohol; Et<sub>2</sub>O-diethyl ether; MeOH-methyl alcohol; Me<sub>2</sub>CO-acetone; MeCN-acetonitrile; PhOH-phenol; PhCl-chlorobenzene; PhMe-toluene; i-PrOH-isopropyl alcohol; THF-tetrahydrofuran etc.

For reagents, radicals, ligands, protecting groups: Ac-acetyl; Acac-acetyl acetone; Ad-adamantyl; Alk-alkyl; All-allyl; Ar-aryl; Bn-benzyl (PhCH<sub>2</sub>); Bu-butyl (s-Bu, i-Bu, t-Bu respectively); Bz-benzoyl (PhCO); Cbm-carbamoyl; Cp-cyclopentadienyl; en-ethylenediamine (as ligand only); Et-ethyl; Hal-halogen; Het-hetaryl; Me-methyl; Mes-Mesityl; Ph-phenyl; Pr-propyl; i-Pr-isopropyl; Py-pyridine; Pf-trifluoromethanesulfonyl; Ts-tosyl; Vinvinyl as well as common designations for aminoacids, carbohydrates and protecting groups.

Author should emphasize any unexpected or new hazards encountered and appropriate precautions in experimental reported work.

**Nomenclature:** Authors should use a systematic name following Chemical Abstracts or IUPAC conventions for each compound whose preparation is reported in the 'Experimental' section or in the 'Supplementary Information'. IUPAC guides to organic and biochemical nomenclature are available on the web at <http://www.chem.qmw.ac.uk/iupac>. For certain specialized classes of compounds such as steroids, peptides, carbohydrates, and cyclophanes, the names should conform to the nomenclature conventions generally accepted for that class. Complex compounds with unduly lengthy or unwieldy names should be referred to by their functional class and structure number in the text.

**Tables:** The use of tables is encouraged to present data in a space-efficient manner. Tables must be inserted in the manuscript word-processor file near their first mention in the text. They should be created with the word processor's

table-formatting feature. Each data entry should be placed within its own table cell; tabs and line returns should not be used within cells. Arrangements that leave many columns only partially filled should be avoided.

Footnotes within tables should be given lowercase italic letter designations and should be cited in the table with lowercase italic superscripted letters. The sequence of letters should proceed by row, and from left to right within any rows having more than one footnote. If a reference is cited both in the text and in a table, the lettered footnote in the table should cite the text reference's number.

Above each table should be typed in boldface characters, a sequential Arabic table number and short descriptive title. Whether possible, structure number should be used in table rather than small structural graphics. A table that contains one or more structures or other graphics is considered a single graphic for journal production. The table number title and any footnotes should not be included in the graphic but should be typed in the manuscript text file.

**Graphics:** All graphics (illustrations) must be prepared in digital format and inserted into the manuscript word processor file near their first mention in the text. Graphics intended to appear in black and white or grayscale should not be submitted in colour. When areas in a graphic created with a graphics program need to be shaded or filled in parallel lines or crosshatching, rather than gray shading, should be used whenever possible to allow the graphic to be processed as line art rather than as grayscale art.

The editors encourage the use of colour in manuscript graphics and in the TOC graphics when it is important for clarity of presentation. Although there is no charge for inclusion of colour illustration in the manuscript, paper reprints containing colour graphics has a supplemental charges of \$50 per 100 copies (1000 Rs. Per 100 copies). There are no restrictions on the use of colour in the Supplementary Information.

The quality of the graphics published in the journal depends on the quality of the graphic images provided by authors. Digital graphics should have minimum resolution.

Black and white line art 1200dpi

Grayscale art 600dpi

Colour art 300dpi

For uniformity of appearance, all the graphics of the same type should share a common graphic style and font. Structures, schemes and other drawings are made with standard drawing programme - most preferable advanced version of ChemDraw. Drawings made with CorelDraw 5/ 11. For scanned halftone figures a resolution of 300 dpi is sufficient. Scanned figures compressed with JPEG usually give no problems.

**viii. Results & Discussion:** This section should not in-

clude any description of experimental work. Results are best presented in tabular or diagrammatic or reaction schemes form, followed by an appropriate statistical evaluation, which should be in accordance with accepted practice. A subjective description of the results should be avoided any discussion should comment on the scope of the method and its validity, followed by a statement of any conclusions drawn from the work. Appropriate negative results should be reported.

Authors are encouraged to make extensive use of supplementary information, which is submitted at the same time as the manuscript is made available on the journal's website, and is electronically linked to the manuscript in the journal's web edition. The use of Supplementary Information is particularly appropriate for presenting additional discussion, graphs, spectra and tables that are more likely to be of the interest to specialists than to general readers. Refer the 'Supplementary Information' section for the guidelines of preparing this material for submission.

**ix. Conclusions:** If an optional conclusion section is used, its content should not substantially duplicate the abstract.

**x. Acknowledgement:** This section may be used to acknowledge helpful discussion with colleagues, technical assistance, gifts of starting material or reference samples, data from individual providers of spectroscopic, analytical or crystallographic services who are not coauthors, and financial support.

**xi. Supplementary Information available statement:** If the manuscript is accompanied by any Supplementary Information, a brief description of the Supplementary Information material must be included in the manuscript. This material is available free of charge via Editorial Office on request.

**xii. References and Footnotes:** Authors should be judicious in citing the literature; unnecessarily long list of references should be avoided. Any articles, communications, letters, patents, theses, and conference abstracts in which portions of the reported work have been previously disclosed must be cited long footnotes should be avoided; additional data and peripheral discussion should be placed in the Supplementary Information rather than in footnotes.

All the references and footnotes must be placed together in a list at the end of the manuscript text. They should be numbered with Arabic numerals in the order of the first citation in the text, and the corresponding numbers inserted at the appropriate locations in the text as superscripted numerals with square brackets. It is crucial that authors verify their accuracy. Authors should consult a recent issue of the journal or ask editorial help.

## Journal

A.K.Bose, M.S.Manhas, M.Ghosh, M.Shah, V.S. Raju, S.S.Bari, S.N.Newaz, B.K.Banik, A.G.Chaudhary,

K.J.Barakat; *J.Org.Chem.*, **56**, 6998 (1991).

## Book

T.Greene, W.Wuts; 'PGM Protecting Groups in Organic Synthesis', 2nd Ed., John-Wiley; New York, (1991).

## Chapter in book

E.G.Kauffmann; The Fabric of Cretaceous Marine Extinctions, pg.151-248, in W.A.Beggren, J.A. Van, Couvering Eds. 'Catastrophes and Earth History', Princeton University Press, Princeton (NJ) (1984).

## Inpress

A.Dandia, R.Singh, S.Khaturia, C.Merienne, G. Morgan; A.Loupy; *Bioorganic and Medicinal Chemistry* (in press).

## Dissertation

L.Clegg; The Morphology of Clonal Growth and its Relevance to the Population Dynamics of Perennial Plants, PhD dissertation, University of Wales, Bangor, United Kingdom.

## Master's Thesis

S.Bhan; Growth of Grass Shrimp in a Contaminated and Uncontaminated site, Master's Thesis, New Jersey Institute of Technology, Newark (1997).

## News Paper

N.Kowlofsky; Oil spill has massive effects on vegetation, *New York Times*, 29 March, pB2 (1998).

## Presented Papers

R.L.P.Kleiman, R.S.Hedin, H.M.Ednborn; Biological Treatment of Mine water- an overview, Paper presented at the Second International Conference on Abatement of Acid Drainage, Montreal, Canada, 16-18 Sept. (1991).

## Report

[USEPA] US Environmental Protection Agency; Characterization of Municipal waste in the United States, Washington (DC): Office of Solid waste and emergency response, Report no.EPA/530-R-92-019 (1992).

## Website

In parentheses, show the date, the site was last accessed the date you checked to make sure the site was still online and the URL, separated by a semicolon. Do not use ending punctuation.

**xiii. Table of Contents graphic:** The Journal features a Table of Contents (TOC) that contains a graphic presentation for each entry, in addition to the title and author list. Authors are required to submit a graphic for the TOC that in conjunction with the manuscript title, is meant to convey to the reader the essence of the work and thereby capture the reader's attention. It may be a key structure, reaction, equation, concept or theorem etc. or an ingenious representation thereof, that is discussed in the manuscript. The use of colour to enhance the quality and appearance of the TOC graphic is encouraged. The TOC graphic must be inserted as the last page of the manu-

script text file. Text is limited to the labeling of compounds, reaction, arrows, and diagrams. A TOC graphics is not an abstract. The graphic and the title which will be placed adjacent to the graphic during production are together meant to attract the reader's interest without providing specific results. The TOC graphic file should be saved as TIFF at 300 dpi resolution for colour and at 1200 dpi for black and white.

### **Supplementary Information**

Material that is not needed for reading the papers but which should be available to document experiments or calculations for future researchers should be put into 'Supplementary Information'.

This material may include tables, illustrations, derivations, experimental procedures, analytical and spectral characterization data, spectra.

Material deposited as Supplementary Information will be made available free of charge from Editorial Office on request.

The technical content of the Supplementary Information is discussed in "Results and Discussion", "Experimental". sections. This section describes the mechanics of preparing the Supplementary Information for submission.

A wide range of electronic formats is supported. All text and graphics (including spectra) should be combined into a single PDF file. If submission as a single file is not possible then all files of the same file type should be combined. The size of any single file is limited to 5 MB.

Text in the Supplementary Information should meet the same formatting and typographic requirements as the manuscript text graphics must meet the same quality standards as the graphic in the manuscript. Spectra should be in sharp focus, have dark unbroken lines, and be labeled with a structure number and a small graphic of the structure, axis labels and scales, peak frequencies or chemical shifts and all other text and numerical information must be clearly legible. Captions for figures other than spectra should be appeared directly below the figures.

All the pages of Supplementary Information files containing text and graphics must be consecutively numbered SI1, SI2. The first page (SI1) must be a title page containing the title of the manuscript the names of the authors and a detailed table of contents with the page numbers of individual spectra, tables and other data. The requirements for providing a title page with table of contents and for numbering the pages do not apply to crystallographic data submitted as CIFs.

A Supplementary Information available statement identifying the type of supplementary material being furnished must be inserted in the text of the manuscript immediately before the References and Footnotes.

## **5. COPYRIGHT TRANSFER AGREEMENT**

A properly completed and signed Copyright Transfer Agreement must be provided for each submitted manuscript. The CTA form with the assigned manuscript number will be provided to corresponding author by Editorial Office. The signed CTA form should be faxed or sent by post to the Editorial Office. Manuscript will be sent for review after receiving signed CTA form.

If a manuscript is not accepted for publication or is withdrawn by the author the transfer of CTA to the TSI is automatically cancelled. Supplementary Information will be considered as a part of publication and will covered by copyright.

## **6. PROOFS**

Proofs will be sent electronically. Only typographic corrections and other minor changes may be made in a galley proof. Any substantive changes will require editorial approval and may delay publication.

## **7. REPRINTS**

Access of 100 e-reprints are free to the corresponding author. Printed reprints may be ordered.

## **8. PUBLICATION CHARGES**

Publication of manuscripts are totally free.