

INDIAN JOURNAL OF CHEMISTRY, SECTION A

GUIDE TO AUTHORS

The Journal and Editorial Policy

The Indian Journal of Chemistry, Section A (IJCA), a monthly journal, publishes results of experimental and theoretical studies in Inorganic, Bioinorganic, Physical, Theoretical and Analytical Chemistry.

Only those contributions which are timely, original and report work of quality and significance are accepted for publication in the journal. Acceptance for publication is subject to positive recommendation from the referees. The contributions must not have appeared elsewhere. Contributions in which the primary interest is for workers in agriculture, pharmacology or applied chemistry, should be submitted to appropriate specialised journals in these fields.

In the case of an article with more than one author, all correspondence regarding it will be made only with the senior author or the author who has communicated the article.

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Submission of the Manuscript

Manuscripts may be submitted through our Online Submission portal, <http://op.niscair.res.in>. The complete manuscript in MS word format incorporating the tables and illustrations with captions should be uploaded as the primary file. The tiff/jpeg files of the illustrations and pdf files of the supplementary data as well as the certificate of originality, signed by all the authors on the official letterhead, should be uploaded separately as supplementary files. Authors may also suggest names of referees (2 Indian and 2 foreign). *The journal does not levy article submission or processing charges.*

Types of Contributions

Manuscripts will be considered for publication as Rapid Communications, Papers, Notes or reviews under the column "Advances in Contemporary Research". In addition, Book Reviews are also published in the Journal.

Rapid Communications:

Work of current interest, reporting novel chemistry, which is likely to stimulate other workers in the field and needs to be brought to the attention of research workers expeditiously, will be considered for publication as Rapid Communication. The Rapid Communications should be brief and accompanied by a note in duplicate justifying urgent publication. Every effort will be made to publish an accepted communication within 6-8 weeks of its receipt.

Papers:

Contributors are encouraged to submit detailed accounts of the results of complete and definitive studies. Publication of results in a fragmented form should be avoided. Instead of submitting separate papers on closely related studies, the results should be consolidated in a single paper. This will help in a better overall appreciation of the work. Papers based on work previously reported as brief communications will be considered only if they represent a substantial amplification.

Notes:

Articles which describe results of either routine investigations having only data value or a study of limited scope, or an unusual observation of interest are considered as Notes. These should be concise and devoid of well-known experimental details.

Advances in Contemporary Research:

Short reviews of contemporary research in various fields of Inorganic, Physical, Theoretical and Analytical Chemistry will be considered under this section. Ideal length of the review is 30-35 manuscript pages. Focus should be on critical coverage of available information on newer concepts and techniques rather than mere listing of literature. The authors' own work should be integrated in the review. Future possibilities should also be discussed.

Book Reviews:

These are usually written on invitation. However, unsolicited reviews can also be considered if the books reviewed are appropriate for the readership of the journal.

Organisation and Layout of the Manuscript

Manuscripts should be prepared in grammatically correct English. MS Word should be used for inputting the text using Times New Roman (12 pts) and symbols (12 pts). Equations should be input in 11 pts using Equation Editor and set to within 8.5 cm width. The equations may be split to more than one line, if necessary. Equations should be numbered as ... (1), ... (2), etc. Tables should be input using the Table Editor and not tabs or spaces. The text should be typed with 1.5 line spacing with margin of 1" on all sides. The entire manuscript should be prepared as one file. The Tables should be inserted after the text, followed by the figure captions and the figures.

The material should be presented in the following order: (i) Title of paper; (ii) Name(s) of author(s); (iii) Institute and address of author(s); (iv) Abstract; (v) Introduction; (vi) Experimental; (vii) Results and Discussion; (viii) Conclusions; (ix) Acknowledgement; (x) Supplementary Data; (xi) References; (xii) Graphical abstract. All tables and figures should be given at the end of the article.

Title:

It should be useful in indexing and information retrieval. If an article forms part of a series, a sub-title indicating the aspects of the work covered in the present article should be provided. The title of an article should include names and not formulae of chemical substances and should not contain abbreviations. A short title suitable for use as a running title should also be given.

Authorship:

The initials and surnames of all the authors should be given, elaborating an initial only if it is necessary for identification. The complete address where work has been performed should follow the names of the authors. If the present address of an author is different, it should be given as a footnote. The author for correspondence should be indicated by (*). The email address of the author for correspondence is essential.

Abstract:

The abstract should be informative and indicate the scope and principal findings of the study. It should normally not exceed 200 words or ~3 % of the length of the paper.

Introduction:

The introduction should place the work in proper perspective and clearly state the scope and objectives. The background discussion should be brief and restricted to pertinent material, i. e., what is necessary to indicate the reason for undertaking the research and essential background. Extensive reviews of previous work should be avoided and documentation of the literature should be selective rather than exhaustive, particularly if reviews can be cited.

Materials and Methods/ Experimental:

This section should be clearly stated with sufficient details to enable others to repeat the study. New methods should be described in detail, but if the methods are already known, a mere reference with modifications, if any, will suffice. General reaction conditions should be given only once. Details which do not contribute to a better understanding of the procedures should be avoided. Materials and Methods should be used in Full Papers, while Experimental should be used in Notes.

Results and Discussion:

It is desirable to combine the results and discussion under one section, with the results given first followed by a discussion of its significance. This aids easy understanding of the results obtained. Discussion should deal with interpretation of results without repeating the information already presented as results. It should relate the new findings to the known and include logical deductions.

Only primary data essential for following the discussion and the main conclusions emerging from the study should be included. Secondary data may be retained by the authors for supply on demand. SI units and associated conventions should be used throughout. Same data should not be presented in tabular and graphic forms.

Infrared, ultraviolet, NMR and mass spectra and DTA and TG curves, etc., are not included unless they are essential for the discussion, e.g., papers dealing primarily with interpretation of spectra and those in which band shape or fine structure need to be illustrated. Otherwise significant numerical data should be cited in the text, if they provide new information. In the case of a series of similar type of compounds, listing of the spectroscopic data for all the compounds may not be necessary.

Tables:

Tables must be given on separate sheets after the references and numbered sequentially in order of first appearance in Arabic numerals. Tables should bear brief titles. Column headings should be brief and units of measurement (SI units) should be abbreviated and placed below the headings. Nil results should be indicated and distinguished clearly from the absence of data. Tables should be referred to in the text as Table 1, Table 2, etc.

Illustrations:

All illustrations must be numbered consecutively in Arabic numerals and referred to in the text as Fig. 1, Scheme 1, etc. and not by terms like 'above', 'preceding' or 'following'. All illustrations should be of either column width (7.5–8.5 cm) or page width (12–17.5 cm) and should not require any reduction. Lettering in the illustrations should be Arial font

7–8 pt, not bold (or 9 pt Times New Roman, not bold). For graphs, axes labels should be in 8 pt Arial (or 9 pt Times New Roman) and given as: Parameter (Units) [e.g. λ (nm), Time (min)]. Curves should be labeled as 1, 2, and parts of figures as (a), (b), etc. For photographs and images, high quality digital images should be provided. Coloured illustrations should be saved in the CMYK mode with a resolution of 300 dpi. Half tones and black and white illustrations should be as bitmap/grayscale with a resolution of 200 dpi. Captions and legends to the figures should be self-explanatory and should be given on a separate sheet after the tables. The illustrations should be placed after the captions and also sent in tiff/ jpeg formats separately.

Structural Formulae:

The number of structural formulae should be restricted to the minimum and included only if the purpose is not adequately served by chemical or common names. Structural formulae should be numbered in sequence and referred to in the text by their numbers. Reaction schemes should be numbered as schemes and should be referred to in the text as Scheme 1, etc., and not by expressions like 'below', 'above', 'preceding' or 'following'.

Nomenclature:

The nomenclature should conform to the Definitive Rules for Nomenclature of the International Union of Pure and Applied Chemistry and the practices of Chemical Abstracts. Some pertinent references are:

- (i) *Nomenclature of Inorganic Chemistry*, 3rd Edn, (Blackwell, Oxford) 1990; Indian Edition (Jain Interscience, Delhi) 1994, "Red Book".
- (ii) *Quantities, Units and Symbols in Physical Chemistry*, 2nd Edn, (Blackwell, Oxford) 1993, "Green Book".
- (iii) *Compendium of Macromolecular Nomenclature*, (Blackwell, Oxford) 1991, "Purple Book".

Abbreviation and Acronyms:

These should be used sparingly and full expansions of acronyms must be given at their first place of occurrence.

Symbols and Units:

SI units and associated conventions should be used. Units of measurement should be abbreviated when used with numerals but must be written out when they occur in the text without the numerals. Symbols representing physical quantities should be given in italics, and the units should be given in the Roman (upright) fonts. There should be a space between the numeral and the units [e.g. $T = 273$ K].

Conclusions:

The conclusions should not summarise information already presented. It should stem directly from the data presented, without any extra material. It should highlight the novelty and significance of the study.

Acknowledgement:

This should be brief and should acknowledge funding agencies (with grant/project details) and other special assistance. Trivial formalities like permission to carry out the study, etc., should be avoided.

References:

References to literature, numbered consecutively, must be placed at the end of the paper. In the text, these should be indicated by numbers and placed as superscript before the punctuation mark [e. g., The ionic liquids are highly polar solvents^{10,19}, and a large number of photophysical studies are reported in these media²⁰⁻²⁴].

In citing references to research papers, surnames and initials of authors should be followed, in order, by the title of the periodical in the abbreviated form (italics), the volume number, the year within circular brackets and the page reference [e.g. Dewan A, Kakati D K & Das B K, *Indian J Chem*, 49A (2010) 39]. The name of all the authors should be given and abbreviations like *et al.*, *idem* and *ibid* should be avoided. For names of periodicals, the standard abbreviations listed in the World List of Scientific Periodicals edited by William Allan Smith & Francis Lawrence Kent (Butterworths Scientific Publications, London) should be used. If the reference is to an article published without any authorship in a periodical, the title of the article takes the place of author in the citation.

Reference to a book should include, in the following order: surnames and initials of authors, the title of the book (italics), name of publisher and place of publication within circular brackets, year, pg [e.g. Mitchell M, *An Introduction to Genetic Algorithms*, (MIT Press, Cambridge) 1996, p. 45. Proceedings of conferences and symposia should be treated in the same manner as books.

Reference to a thesis should include the name of the author, the title of the thesis (italics), university or institution to which it was submitted and year of submission [e.g. Dolui B K, *Ion-solvent Interaction in Isodielectric Solvent Mixtures of Protic Ethylene Glycol and Dipolar Aprotic N, N-Dimethyl Formamide*, Ph D Thesis, Jadavpur University, Kolkata, India, 2004].

Reference to a patent should include names of patentees, country of origin (italics), patent number, and the organization to which the patent has been assigned (if available) within circular brackets, date of acceptance of the patent and reference to an abstracting periodical where available [e.g. Kosin J A, Preston W & Wallace D N, *US Patent No. 4,883,533*, Nov 28, 1989].

Graphical Abstract:

As part of the contents page, the graphical abstract will appear independent of the main paper. Typically, a graphical abstract is small graphic (max. width: 8 cm) with one or two sentences, highlighting the novelty and main finding of the study.

Electronic Supplementary Data

Authors are encouraged to take advantage of the facility to submit supplementary data in the electronic form. These data will be made available along with the online version of the article, with a URL reference in the print version. Supplementary data should be submitted along with the main article and shall be peer reviewed. All supplementary data are considered to be part of the submitted article and should not be included in any other publication.

Data which are not of primary importance but which support the main conclusions of the study like detailed description of the experimental methods, repetitive procedures, large tables, spectra, high resolution images, structures, colour diagrams, etc., may be included as supplementary data.

Supplementary data should be submitted in the final form and should conform to the format of the main paper. Supplementary data will not be edited and hence should be clearly presented. All supplementary data should be collected in a single PDF file in the following order: Text, Tables, Figs (including the caption). Tables should be numbered sequentially as Table S1, Table S2,and figures as Fig. S1, Fig. S2...etc. All such material should be referred to in the text of the main article as (Supplementary Data, Table/Fig. S1...). The pages of the PDF file should be numbered starting from 1. The first page of the supplementary data file should have the following in Times New Roman: (i) Title of the article (15 pt); (ii) Authors' names (10 pt); (iii) Institutional addresses including email address (9 pt); (iv) Contents of the file with their page no. (10 pt).

A brief statement describing the material included as supplementary data should be included in the manuscript after the concluding paragraph in the following format:

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The manuscript should be accompanied by a certificate of originality stating that:

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- all authors have seen and approved this manuscript and consent to having their name in the list of authors, thereby taking responsibility for the results contained in the manuscript.
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Full paper 15 pt;
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Synthesis of nanocrystalline NiO by sol-gel and homogeneous precipitation methods

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P Jeevanandam* & V Ranga Rao Pulimi

Department of Chemistry, Indian Institute of Technology Roorkee, Roorkee 247 667, India

Email: jeevafcy@iitr.ernet.in

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| No. | Contents | Pg No. |
|-----|---|--------|
| 1 | Fig. S1 – FT-IR spectra for the precursors. (1), and (2) correspond to the precursors prepared from sol-gel process, and homogeneous precipitation, respectively. | 2 |
| 2 | Fig S2 – TGA patterns for the precursors. (1), and (2) correspond to the precursors prepared from sol-gel process, and homogeneous precipitation, respectively. | 2 |

Supplementary data to be submitted in the final form as Word file, with the pages numbered starting from 1.

All supplementary data (text, tables, figures) should conform to format in the main article and be referred to in the main article.

**Tables to be designated as Table S1, S2, etc.
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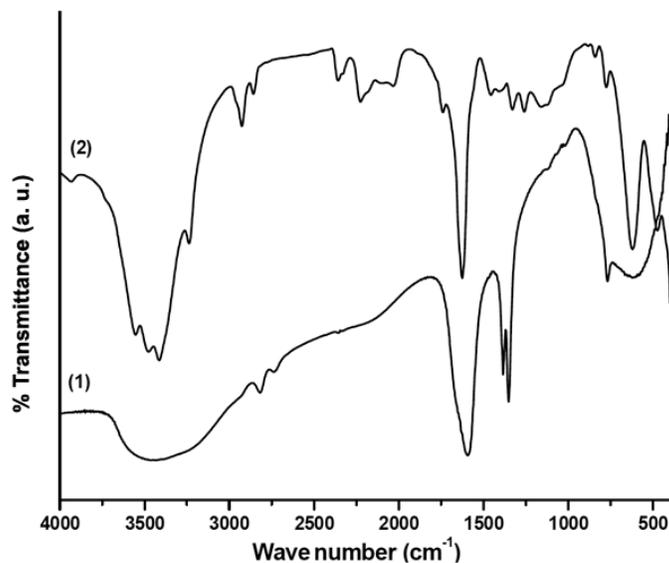


Fig caption:
9 pt; Times New Roman

Fig. S1 – FT-IR spectra for the precursors. (1), and (2) correspond to the precursors prepared from sol-gel process, and homogeneous precipitation, respectively.

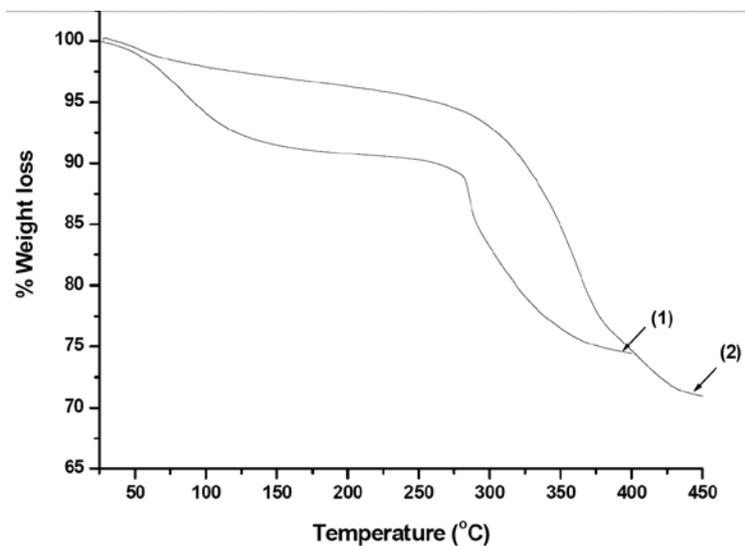


Fig S2 – TGA patterns for the precursors. (1), and (2) correspond to the precursors prepared from sol-gel process, and homogeneous precipitation, respectively.

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