

**1. About Journal**

Indian Journal of Heterocyclic Chemistry— a *Quarterly International Journal* published since 1991. Journal Citation Index is 0.685 (originating in journal Citations Reports, 2016 release – A Thomson Reuters product). NAAS India has accredited a rating of 6.79. ISSN (electronic), 0971-1627, ISSN (print) 2456-4311.

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The papers are required to be plagiarism checked as per International requirements.

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The manuscript should be typed in Times New Roman with double-spaced (2.0) and 1-inch wide margins on all sides of the page.

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- a) Title of Paper
- b) Author's Names, Affiliations and Addresses
- c) Abstract
- d) Graphical abstract
- e) Keywords
- f) Introduction
- g) Results and Discussion
- h) Experimental
- I) Conclusion
- j) Abbreviations and Conventions
- k) Acknowledgements
- l) Supporting Information
- m) References

**v. Title**

The title should accurately, clearly, and concisely reflect the emphasis and contents of the paper and should not contain compound number and reference. The title must be brief and grammatically correct. The title of the paper should be in upper-lower style with the keyword's first character a capital. It should be typed in Times New Roman in bold with font size of 14 and at centre position. For example,

**Polymer-Supported Synthesis of 7-Hydroxy-10-substituted Isoalloxazines  
Synthesis and Solid-state Conformations of 6*S*,8*aR*/*S*-6-Alkyl-3,3- dimethyltetrahydrooxazolo[3,4-*a*]pyrazine-5,8-diones (*Pseudo* proline Diketopiperazines)  
Synthesis and Anticonvulsant Activity of Some New 6,8-*Bis*(aryl)-5-methyl-6,7,8,9-tetrahydro- 5*H*-tetrazolo [1,5-*d*][1,4]diazepines  
Hypervalent Iodine(III) Mediated Synthesis of 3-( $\beta$ -Styryl)-2,1-benzisoxazoles and 3-( $\beta$ -Hetaryl)vinyl-2,1-benzisoxazoles**

**vi. Author's Name, Affiliations and Addresses**

The name of the authors where possible, should be first names, middle initials, and family names for complete identification. Use superscript Arabic numbers to indicate different addresses, which should be as detailed as possible and must include the country name. The corresponding author should be indicated with an asterisk, and contact details (fax, e-mail etc.) should be placed in a footnote. Information relating to other authors (e.g., present addresses) should be placed in footnotes indicated by the appropriate symbols. For example,

Anne Beauchard<sup>1</sup>, Helen F. Dufton<sup>1</sup>, Kere Odumah<sup>1</sup>, Rhian H. Jagers<sup>1</sup>, Mary F. Mahon<sup>2</sup>, Pauline J. Wood<sup>1</sup>, Michael D. Threadgill<sup>1\*</sup> [Times New Roman, 10.5, Bold, centered]

<sup>1</sup>Drug and Target Discovery, Department of Pharmacy and Pharmacology, University of Bath, Claverton Down, Bath BA2 7AY, UK

<sup>2</sup>X-ray Crystallography Unit, Department of Chemistry, University of Bath, Claverton Down, Bath BA2 7AY, UK [Times New Roman, 10, Normal, Centered]

At footnote - \*Corresponding author: Email: [m.d.threadgill@bath.ac.uk](mailto:m.d.threadgill@bath.ac.uk) [Times New Roman, 9.5, Normal, Centered]

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The abstract should briefly state the problem, summarize the principal findings, and point out the major conclusions. Abstract length is one paragraph and not to exceed more than 250 words. The abstract should not contain any references. [Times New Roman, 11, Normal, Justified]

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Clearly drawn figure of approximately 6x12 cm should be included in the main manuscript file below abstract. All chemical drawings should be drawn in ACS style in Chemdraw (also sent as a CDX file separately). The reaction sequence presented in the graphical abstract should be general and should not include the complete reaction conditions. The graphical abstract meant as an aid for the rapid viewing of the journals' contents and to help capture the readers' attention and may feature a key structure, reaction, equation, etc. that the manuscript elucidates upon.

**ix. KEYWORDS** [Times New Roman, 9.5, Bold, Uppercase]

Provide significant keywords to aid the reader in literature retrieval four to seven keywords separated by commas (,) should be listed in alphabetical order after graphical abstract of the title page.

**x. INTRODUCTION** [Times New Roman, 10, Bold, Uppercase]

The introduction should include sufficient background information to provide appropriate context as to the importance of the work and clearly state the rationale and objectives of the research. This part should reveal the background history of the study including the up-to-date literature cited in appropriate manner. This part may be restricted to one page length only. [Times New Roman, 9.5, Normal, Justified]

**xi. RESULTS AND DISCUSSION** [Times New Roman, 10, Bold, Uppercase]

In the Results and Discussion section, authors should emphasize on presenting their own research findings. Since page length restrictions are difficult to define for this section, the authors are advised to present this section in a concise and precise manner. This section may be further subdivided into sub-sections as per requirement, e.g., if the manuscript highlights the synthesis and biological evaluation and docking, this part should have three subsections as: (i) Chemistry (ii) Biology/ Pharmacology (iii) Docking

The presentation of experimental details in the results and discussion section should be kept to a minimum. The discussion of the routine and well-known characteristics of the compounds should be avoided. However, characterization data of representative compounds may be elaborated for the clear understanding of the readers. [Times New Roman, 9.5, Normal, Justified]

**xii. EXPERIMENTAL** [Times New Roman, 10, Bold, Uppercase]

Text formatting of experimental should be [Times New Roman, 9.5, Normal, Justified] except otherwise specified. This section should contain the experimentations performed for the study. Complete experimental details, such as procedures, complete characterization data of the new compounds, biological assay (in case of biological evaluation), etc. must be given in this section. There is no need to include the complete spectral analyses of the known compounds in the main text. However, it is required to give melting point / literature melting point along with relevant references. The spectral data of all the compounds may be supplied in supporting information only. The experimental section should be written in past tense. The quantities of reactants and reagents should be given in both mass and molar units, e.g., "2-ethynylpyridine (0.103 g, 1.0 mmol)".

Yields should represent weighed amounts of isolated and purified products, and should be reported as mass and as percentage of the theoretical value. Preferably integer numbers should be used, e.g., "Yield 93 mg (78%)" instead of "Yield 0.093 g (78%)".

In molecular formulas, elements should be arranged according to the Chemical Abstracts system: C, H, and then all other elements in Latin alphabetical order. Formulas of molecular adducts and onium salts are given with raised dots, e.g., "C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>·2HCl".

When flash or thin layer chromatography is used, both the stationary phase and eluting solvent should be identified.

**Melting and boiling point.** A melting point range and the appearance should be reported for every crystalline solid product, together with the solvent from which it was recrystallized (and literature data for known compounds), e.g., "yellow needles, mp 76–78°C (EtOH) (mp 77–80°C (*i*-PrOH) 12)". Similarly for liquids the boiling point and the look, e.g., "colorless oil, bp 127–128°C (10 mmHg)".

**IR and UV spectra**

IR spectrum (KBr Pellet,  $\nu$ , cm<sup>-1</sup>): 1650 (C=N), 3200–3440 (O–H).

UV spectrum (EtOH,  $\lambda_{\text{max}}$ , log  $\epsilon$ ): 242 (4.55), 380 (4.22).

**<sup>1</sup>H and <sup>13</sup>C NMR spectra.**

The solvent, instrument frequency, and the standard should be identified. If a standard other than TMS is used, its chemical shift on the  $\delta$  scale should be given. To indicate the positions of protons, the designations of the type H-3, H-2,6 (for aromatic protons) and 3-CH, 4,5-CH<sub>2</sub> (for aliphatic protons) should be used. Protons in complex groups, to which a signal relates, should be underlined below, e.g., "3.17–3.55 (4H, m, N(CH<sub>2</sub>CH<sub>2</sub>))". Substituents should be indicated as follows: 3-CH<sub>2</sub>; the positions of atoms should be indicated as follows: C-3, N-4, etc. If a signal in the spectrum is described as doublet, triplet, etc. (rather than a singlet or a multiplet), it is necessary to present the corresponding value of spin-spin coupling constants (e.g., 3J<sub>5,6</sub> or JCF). If additional investigations have been made in order to establish atom connectivities and spatial relationships, the 2D methods used should be identified. The <sup>13</sup>C signal assignments to individual atoms are accepted only on the basis of 2D experiments.

**NMR spectra**

5-Methyl-7-(*N*-methylpiperazino)benzo[*b*]furan hydrobromide (1a) [Times New Roman, 9.5, *Italic*, Justified]

<sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>):  $\delta$  7.58 (d, 1H,  $J$  = 2.0 Hz), 7.00 (d, 1H,  $J$  = 7.8 Hz), 6.63 (d, 1H,  $J$  = 7.8 Hz), 6.77 (d, 1H,  $J$  = 2.0 Hz), 3.21 (m, 4H), 2.66 (m, 4H), 2.46 (s, 3H), 2.39 (s, 3H);

<sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>):  $\delta$  154.9, 143.3, 125.3, 119.9, 115.7, 109.8, 105.5, 55.4, 51.4, 46.2, 14.6.

**Mass spectra**

Mass spectrum (EI, 70 eV),  $m/z$  ( $I_{\text{rel}}$ , %): 386 [M]<sup>+</sup> (36), 368 [M–H<sub>2</sub>O]<sup>+</sup> (100), 353 [M–H<sub>2</sub>O–CH<sub>3</sub>]<sup>+</sup> (23).

Mass spectrum (CI, 200 eV),  $m/z$  ( $I_{\text{rel}}$ , %): 387 [M+H]<sup>+</sup> (100), 369 [M+H–H<sub>2</sub>O]<sup>+</sup> (23).

**High-resolution mass spectrum**

Found,  $m/z$ : 292.1684 [M]<sup>+</sup>. C<sub>17</sub>H<sub>23</sub>O<sub>2</sub>. Calculated,  $m/z$ : 292.1675.

Found,  $m/z$ : 335.0377 [M+Na]<sup>+</sup>. C<sub>13</sub>H<sub>17</sub>BrN<sub>2</sub>NaO<sub>2</sub>. Calculated,  $m/z$ : 335.0371.

**Elemental analysis**

Found, %: C 55.22; H 4.09; Br 20.42; Cl 9.04; N 7.18. C<sub>18</sub>H<sub>18</sub>BrClN<sub>2</sub>O. Calculated, %: C 55.19; H 4.12; Br 20.40; Cl 9.05; N 7.15.

**X-Ray** The data of X-ray structural analysis should be presented as a molecule in figure. Full data should be deposited at the *Cambridge Crystallographic Data Center (CCDC)* (the deposit number should be included in the manuscript).

**Other analytical data**

Other analytical data, if any, may also be added here.

**xiii. CONCLUSION** [Times New Roman, 10, Bold, Uppercase]

This part should have the concentrate of the complete manuscript. However, repetition of the sentences from the previous sections should be avoided. [Times New Roman, 9.5, Normal, Justified]

**xiv. ABBREVIATIONS AND CONVENTIONS** [Times New Roman, 10, Bold, Uppercase]

Standard ACS abbreviations should be used throughout the manuscript and are employed without periods. The preferred forms for some of the more commonly used abbreviations are mp, bp, °C, K, min, h, mL, µL, g, mg, µg, cm, mm, nm, mol, mmol, µmol, M, mM, µM, ppm, HPLC, TLC, GC, 1H NMR, GC-MS, HRMS, FABHRMS, UV, IR, EPR, ESR, DNase, ED50, ID50, IC50, LD50, im, ip, iv, mRNA, RNase, rRNA, tRNA, cpm, Ci, dpm,  $V_{max}$ , Km,  $k_1$ ,  $t_{1/2}$ . All non-standard abbreviations should be defined following the first use of the abbreviation. For a detailed listing of standard abbreviations, see The ACS Style Guide; American Chemical Society: Washington, DC, 1997. [Times New Roman, 9.5, Normal, Justified]

**xv. ACKNOWLEDGEMENTS** [Times New Roman, 10, Bold, Uppercase]

In this section, authors may duly acknowledge people, places and financial support with grant numbers. [Times New Roman, 9.5, Normal, Justified]

**xvi. SUPPORTING INFORMATION** [Times New Roman, 10, Bold, Uppercase]

Spectral data (IR, NMR, and Mass), Elemental analyses, TGA data and any other types of analytical data should be supplied as supporting information. This material should be ready with the authors for any future correspondence. [Times New Roman, 9.5, Normal, Justified]

**xvii. REFERENCES** [Times New Roman, 10, Bold, Uppercase]

References should be placed at the end of the manuscript and be cited in text in square bracket as superscript in Arabic numeric at appropriate places and vice-versa. All the references should run consecutively throughout the paper. Authors are responsible for the accuracy and completeness of all references and therefore it is advised to check the original source of reference. Preferably, each reference should contain only one literature citation. Journal titles should be abbreviated according to American Chemical Society guidelines. As much as possible, important recent references should be provided. [Times New Roman, 9.0, Normal, Justified]

**Reference to scientific articles:**

- [1] Ueda, S.; Su, M.; Buchwald, S. L. Highly  $N^3$ -selective palladium-catalyzed arylation of 1,2,3-triazoles, *Angew. Chem. Int. Ed.*, **2011**, *50*, 8944-8947.
- [2] Yan, W.; Wang, Q.; Lin, Q.; Li, M.; Petersen, J. L.; Shi, X. *N*-2-aryl-1,2,3-triazoles: A novel class of UV/blue-light-emitting fluorophores with tunable optical properties, *Chem. Eur. J.*, **2011**, *17*, 5011-5018.
- [3] Beauchard, A.; Dufton, H.F.; Odumah, K.; Jaggars, R.H.; Mahon, M.F.; Wood, P.J.; Threadgill, M.D. Synthesis and solid-state conformations of 6S, 8aR/S-6-Alkyl-3, 3-dimethyltetrahydrooxazolo [3,4-a] pyrazine-5,8-diones (Pseudoproline Diketopiperazines), *Indian J. Heterocycl. Chem.*, **2018**, *28*, 11-24.

**Reference to an edited book:**

- [4] Busacca, C. A.; Senanayake, C. H. *Transition Metal-Catalyzed Couplings in Process Chemistry: Case Studies from the Pharmaceutical Industry* (Eds.: J. Magano, J. R. Dunetz), Wiley, Weinheim, **2003**.

**Reference to a chapter in an edited book:**

- [5] Almlöf, J.; Gropen, O. Relativistic Effects in Chemistry. In *Reviews in Computational Chemistry*; Lipkowitz, K. B., Boyd, D. B., Eds.; VCH: New York, **1996**; Vol. 8, pp 206-210.

**xviii. Schemes**

Groups of reactions that show action are called schemes. Chemical drawings must be drawn in ChemDraw in ACS style; and CDX files should be sent separately. Schemes may have brief titles *i.e.* caption, describing their contents. The caption should follow the format "**Scheme 1: Synthesis of .....**". [Times New Roman, 9.0, Bold, Centered] All the schemes should be at appropriate position in the text and must be cited in text in square bracket e.g. [Scheme 1]. All the scheme presented in the text should be Arabic numbered.

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**xxi. Page Number**

Page numbers may be added to the bottom of the page in right corner.

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