# IMPORTANT

# The information about the authors and affiliations should only be in the title page, not in the manuscript

# Title page example:

**Investigation of Thermal and Electrical Properties of Composite Cathode Materials Pr1-xSrxFe1-yCoyO3 (x=0.3, 0.4; y=0.2): GDC and La2Ni1-xCoxO4+δ (x=0.2): GDC for SOFC**

Kenzhebatyr Zh. Bekmyrzaa,\*, Nursultan K. Aidarbekova, Lukman Omeizaa,b

1Faculty of Physics and Technical Sciences, L.N. Gumilyov Eurasian National University, Astana 010008, Kazakhstan

2Faculty of Integrated Technologies, Universiti Brunei Darussalam, Gadong BE1410, Brunei

Correspondence: kbekmyrza@yandex.kz

# Manuscript template: Full title must be in sentence case

# For example:

**Investigation of Thermal and Electrical Properties of Composite Cathode Materials Pr1-xSrxFe1-yCoyO3 (x=0.3, 0.4; y=0.2): GDC and La2Ni1-xCoxO4+δ (x=0.2): GDC for SOFC**

#### **Abstract**

The abstract should be self-contained, citation-free, and should not exceed 300 words. The abstract should briefly describe the purpose of the study, how the investigation was performed, the most important results, and the principal conclusions that were drawn from the results, respectively. Nonstandard or uncommon abbreviations should be defined at first mention within the abstract. The abstract should be typed in Times New Roman, 9-point, non-italic, and non-boldface.

**Keywords:** Please provide keywords or phrases to enable retrieval and indexing. Acronyms should be avoided

#### **Introduction**

This section should be succinct, with no subheadings. The author(s) should strive to define the significance of the work and the justification for its publication. Any background discussion should be brief and restricted to pertinent material.

#### **Material and methods (Experimental or Methodology or Patients and methods)**

This part should contain sufficient detail that would enable all procedures to be repeated. It can be divided into subsections if several methods are described. Authors should be as concise as possible in experimental descriptions. The experimental section must contain all the information necessary to guarantee reproducibility. Previously published methods should be indicated by a reference and only relevant modifications should be described. All vendor details, including company, city, and country, should be mentioned for chemicals, reagents, strains, etc. For statistical analysis, please state the appropriate test(s) in addition to a hypothesized p-value or significant level (for example 0.05).

#### **Results and Discussion**

They should be combined. The study results should be clear and concise. Restrict the use of tables and figures to depict data that is essential to the message and interpretation of the study. The results should be presented in a logical sequence in the text, tables, and illustrations. The discussion should explore the significance of the results of the work, not repeat them. Include in the discussion the implications of the findings and their limitations, how the findings fit into the context of other relevant work, and directions for future research.

#### **Conclusion(s)**

The main conclusion(s) of the study should be presented in a short conclusion statement highlighting the goals of the study and its importance. State new hypotheses when warranted. Include recommendations when appropriate.

#### **Acknowledgment(s)**

All acknowledgments (if any) should be included at the very end of the manuscript before the references. Anyone who contributed to the research or manuscript, but who is not a listed author, should be acknowledged (with their permission).

#### **References**

Text: Indicate references by Arabic numerals in brackets, which run in order of appearance throughout the text (Vancouver style). For instance [1] or [7-10, 13,15]. The actual authors can be referred to, but the reference number(s) must always be given.

Sources published in other languages ​​must be translated into English and placed in square brackets.

#### **Figures**

Figures and tables should not be submitted in separate files. If the article is accepted, authors will be asked to provide the source files of the figures. Each figure should be supplied in a separate electronic file. All figures should be cited in the manuscript in consecutive order. Figures should be supplied in either vector art formats (Illustrator, EPS, WMF, FreeHand, CorelDraw, PowerPoint, Excel, etc.) or bitmap formats (Photoshop, TIFF, GIF, JPEG, etc.). Bitmap images should be of 300 dpi resolution at least unless the resolution is intentionally set to a lower level for scientific reasons. If a bitmap image has labels, the image and labels should be embedded in separate layers. Figures should be referred to as Fig. 1, Figs. 2, 3-5, using Arabic numerals. Ensure that all tables, figures, and schemes are cited in the text in numerical order. Figure parts should be denoted by lowercase letters (a, b, c,..etc.).

#### **Tables**

Tables should be cited consecutively in the text. Every table must have a descriptive title and if numerical measurements are given, the units should be included in the column heading. Vertical rules should not be used. Figure and table captions should be 9-point Times New Roman, boldface, and non-italic. Initially capitalize only the first word of the caption. Figure captions are to be below the figures and Table titles are to be fully justified right and left above the table.

#### **Nomenclature and Units**

All measurements and data should be given in SI units where possible, or in other internationally accepted units in parentheses throughout the text. Illustrations and Tables should use conventional units, with conversion factors given in legends or footnotes.

**STATEMENTS AND DECLARATIONS**

The following statements must be included in your submitted manuscript under the heading 'Statements and Declarations'. This should be placed after the References section. Please note that submissions that do not include required statements will be returned as incomplete.

**Funding (Mandatory starting from 2025)**

Please describe any sources of funding that have supported the work. The statement should include details of any grants received (please give the name of the funding agency and grant number).

Example statements:

“This work was supported by […] (Grant numbers […] and […]). Author A.B. has received research support from Company A.”

“The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.”

**Competing Interests (Mandatory starting from 2025)**

Authors are required to disclose financial or non-financial interests that are directly or indirectly related to the work submitted for publication. Interests within the last 3 years of beginning the work (conducting the research and preparing the work for submission) should be reported. Interests outside the 3-year time frame must be disclosed if they could reasonably be perceived as influencing the submitted work.

Example statements:

“Financial interests: Author A and B declare they have no financial interests. Author C has received speaker and consultant honoraria from Company M. Dr. C has received speaker honorarium and research funding from Company M and Company N. Author D has received travel support from Company O. Non-financial interests: Author D has served on advisory boards for Company M and Company N.”

“The authors have no relevant financial or non-financial interests to disclose.”

Please refer to the “Competing Interests” section below for more information on how to complete these sections.

**Author Contributions (Optional)**

Authors are encouraged to include a statement that specifies the contribution of every author to the research and preparation of the manuscript.

Example statement:

“All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by [full name], [full name] and [full name]. The first draft of the manuscript was written by [full name] and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.”

Please refer to the “Authorship Principles ” section below for more information on how to complete this section.

**Data Availability (Optional)**

This journal encourages authors to provide an optional statement of data availability in their article. Data Availability Statements should include information on where data supporting the results reported in the article can be found, including, where applicable, hyperlinks to publicly archived datasets analysed or generated during the study. Data availability statements can also indicate whether data are available on request from the authors and where no data are available, if appropriate.

Example statements:

“The datasets generated during and/or analysed during the current study are available in the [NAME] repository, [PERSISTENT LINK TO DATASETS]”

“The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.”

Please refer to the “Research Data Policy and Data Availability” section below for more information on how to complete this section.

In addition to the above, manuscripts that report the results of studies involving humans and/or animals should include the following declarations:

**Ethics approval (Optional)**

Authors of research involving human or animal subjects should include a statement that confirms that the study was approved (or granted exemption) by the appropriate institutional and/or national research ethics committee (including the name of the ethics committee and reference number, if available). For research involving animals, their data or biological material, authors should supply detailed information on the ethical treatment of their animals in their submission. If a study was granted exemption or did not require ethics approval, this should also be detailed in the manuscript.

“This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of University B (Date.../No....).”

“This is an observational study. The XYZ Research Ethics Committee has confirmed that no ethical approval is required.”

For detailed information on relevant ethical standards and criteria, please refer to the sections on “Research involving human participants, their data or biological material”, “Research involving animals, their data or biological material”.

**Consent to participate (Optional)**

For all research involving human subjects, freely-given, informed consent to participate in the study must be obtained from participants (or their parent or legal guardian in the case of children under 16) and a statement to this effect should appear in the manuscript.

Example statement:

“Informed consent was obtained from all individual participants included in the study.”

“Written informed consent was obtained from the parents.”

Please refer to the section on “Informed Consent” for additional help with completing this information.

**Consent to publish (Optional)**

Individuals may consent to participate in a study, but object to having their data published in a journal article. If your manuscript contains any individual person’s data in any form (including any individual details, images or videos), consent for publication must be obtained from that person, or in the case of children, their parent or legal guardian. This is in particular applicable to case studies. A statement confirming that consent to publish has been received from all participants should appear in the manuscript.

Example statement:

“The authors affirm that human research participants provided informed consent for publication of the images in Figure(s) 1a, 1b and 1c.”

Please refer to the section on “Informed Consent” for additional help with completing this information.