

## Article Title

(Font Book Antiqua, 14pt, Bold, Center, Max 17 words)

First author<sup>1</sup>, Second author<sup>2</sup>, Third author<sup>3</sup>, etc

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## Article Info

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(English, max 5 words,

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## ABSTRACT

The abstract must be clear, and descriptive. The abstract can provide a brief description of the problem under research. The abstract consists of the research background and goal, methods, results, and conclusions. Abstracts are written using English in one paragraph, a maximum of 200 words, in Book Antiqua font, 9pt, and single-spaced. Only conclusions are written in the present tense because the others are written in the past tense.

**How to Cite:**

Kusmawan, U., Pandiangan, P., & Adj, S.S. (2023). Article Title. *Co-Catalyst: Journal of Science Education Research and Theories*, x (x), xx-xx.

## INTRODUCTION (Book Antiqua, 12pt, Bold)

(space 1, 10 pt)

Guidelines for writing articles for CO-CATALYST are used as a guide for writers. Articles are written in Indonesian or English with **8-12 pages** (including references). The body of the article is arranged in one column with A4 paper size (top, right, and left limits = 2.5 cm, while the bottom limit = 2 cm). CO-CATALYST articles consist of Introduction, Methods, Results - Discussion, Conclusions, and References. If needed, an Acknowledgment can be added. Paragraphs are indented by 0.5 cm.

**The introduction** includes a rational and factual background and the urgency of the research. This section also includes theory, material, and all references relevant to the research. In addition, the relationship between research urgency, problem emergence, alternative solutions, and the selected solution. The research's problems, goals, and usefulness are written narratively in paragraphs, with no need to be given special subtitles. The way of writing sources/references in the text (**citation**) consists of the author's name and the year of publication, following the **APA Style** (can be seen at the end of this guide).

It is not permitted to provide headers, footers, or page numbers in articles, because these will be added during the editing process by the Editor. To maintain the quality of the articles in this CO-CATALYST, authors must attention to all the described provisions. Only articles that comply with these journal writing guidelines can be accepted and published.

## **METHODS (*Book Antiqua*, 12pt, Bold)**

(space 1, 10 pt)

**Methods** consist of types, designs, subjects, variations, criteria, locations, populations, samples, instruments, data collection, processing methods, and data analysis techniques. Provide concise and clear explanations for each aspect in the methods section.

When using an instrument like a questionnaire, provide an explanation of its content and the variables to measure. The validity and reliability of the instrument are explained. In experimental research, it is necessary to explain the intervention procedures. In research literature studies, use references according to standards, both in terms of quantity and quality. Whereas for science research, it is necessary to explain each step and test.

The method section is written briefly, with a maximum of 600 words. The method is written in full and in detail so that it can be repeated by others to be developed in further research. This section should have a proportion of 10-15% of articles.

### **Equation**

Mathematical equations are written using Microsoft Equation, accompanied by a description of the symbol in paragraph form and numbered sequentially (1), (2), (3), etc. on the right. For example,

$$P = \frac{F}{A} \quad (1)$$

with  $P$  is pressure ( $\text{N}/\text{m}^2$ ),  $F$  is force ( $\text{N}$ ), and  $A$  is surface area ( $\text{m}^2$ ).

## **RESULT AND DISCUSSION (*Book Antiqua*, 12pt, Bold)**

(space 1, 10 pt)

**The results** of the data obtained from the research are sorted based on the research objectives/hypotheses. Results can be presented in the form of tables, figures, graphs, diagrams, verbal descriptions, or combinations. Table proportions must be adjusted to the needs of the article. Where tables/figures cannot be too big, small, and long. Writers should use variations in presenting research results. In addition, the tables, graphs, and figures presented must be referred to in the text.

### **Table**

The table position is in the middle of the article. The way of writing tables is shown in Table 1. The table does not contain vertical (upright) lines, while horizontal (flat) lines are only found in the head and tail of the table. Font and size for Table and captions are *Book Antiqua*, 11pt. The numbers in the table may not be repeated in verbal narratives, either before or after.

**Table 1.** Impurity percentage of  $\text{Fe}_3\text{O}_4$ /Gelatin composite material (*Book Antiqua*, 11pt)

| No. | Impurity  | Percentage (%) |
|-----|-----------|----------------|
| 1.  | Potassium | 20             |
| 2.  | Sulfur    | 15             |
| 3.  | Copper    | 30             |
| 5.  | Nitrogen  | 24             |

The table's name is written in the middle and above the table, with a distance of 3pt. For table descriptions, write sequentially "**Table 1.**" "**Table 2.**", and "**Table 3.**" in Bold for table numbering, while table explanations/descriptions are not Bold.

### Figure

The figure can be in the form of illustrations, photos, graphs, diagrams, and so on. The figure position is in the middle of the article. The way to write pictures is shown in Figure 1. The size of the pictures is adjusted as needed so that the pictures can be seen clearly by the reader. Font and size for Image captions are *Book Antiqua*, 11pt.

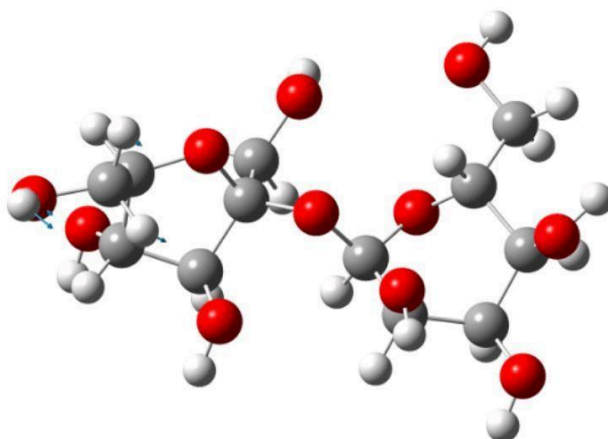


**Figure 1.** Chemical molecular structure (*Book Antiqua*, 11pt)

The figure's name is written in the middle and below the figure, with a distance of 3pt. For figure descriptions, write sequentially "**Figure 1.**" "**Figure 2.**", and "**Figure 3.**" in Bold for figure numbering, while figure explanations/descriptions are not Bold.

**The discussion** is explained by comparing the data obtained at this time with data from previous research. This section includes a description of the results obtained by directing the discussion to the answers to the research hypotheses. As well as emphasizing the similarities, differences, or uniqueness of the findings obtained. Where the implications of the research results are written to clarify the impact of the results of the progress of the science research. In addition, it is also necessary to explain whether the issues raised have been successfully investigated according to the research objectives using the chosen method. This section must include the analysis carried out regarding the suitability of the research results with references, the reasons for the success or failure of the research, as well as added steps that need to be taken for the follow-up process. The discussion section generally ends with various research limitations.

The discussion is intended to interpret the research results according to the theory used and not just to explain the findings. The discussion must be enriched by referring to the results of previous research that have been published in scientific journals. Writing references in the body of the article using *APA Style* (can be seen at the end of this guide).

### CONCLUSION (*Book Antiqua*, 12pt, Bold)

(space 1, 10 pt)

The conclusion is the answer to the hypothesis that leads to the main research objectives and clearly indicates the results obtained. This section includes a summary of the findings without adding new information from what has been described in the previous section. This section is written in one paragraph in narrative form, so bullets and numbering are not allowed. Furthermore, if needed, this section can also be added to recommendations for further research.

### **ACKNOWLEDGMENT (optional)**

(space 1, 10 pt)

Acknowledgments are given to sources of research funding (institutions) or those who support such funding. Where the names are written clearly. However, it should be noted that names mentioned as authors of articles are not allowed to be included in this section.

### **REFERENCE (*Book Antiqua*, 12pt, Bold)**

(space 1, 10 pt)

The references used are sourced from the latest reading sources which include books, journals, articles, proceedings, theses, dissertations, etc. that are no more than the last 10 years old. The minimum of references used is 15, with details of 75% from journals/articles. References are written in *Book Antiqua 12pt* font, single-spaced for spacing between references. The reference uses a hanging pattern, which in the second row is indented by 0.25 cm, and is ordered alphabetically. All sources in the references must be referred to in the manuscript, and what is in the manuscript must appear in these references.

Writing a bibliography must use the reference management available in Microsoft Word, but it is highly recommended to use Mendeley or Zotero, with the *APA Style* (American Psychological Association) format.

## **The Rules and Examples of Writing References and Citations in this Journal:**

### **The Reference based on Number of Authors**

#### **Single author:**

Bushong, S. C. (2020). *Radiologic Science for Technologists E-Book: Physics, Biology, and Protection*. Elsevier Health Sciences.

#### **Two authors:**

Charlton, W., & Hussey, E. (1999). *Aristotle Physics Book VIII* (Vol. 3). Oxford University Press.

#### **(Three – Seven) authors:**

Cherry, S. R., Sorenson, J. A., & Phelps, M. E. (2012). *Physics in nuclear medicine e-Book*. Elsevier Health Sciences.

Friman, B., Höhne, C., Knoll, J., Leupold, S., Randrup, J., Rapp, R., & Senger, P. (Eds.). (2011). *The CBM physics book: Compressed baryonic matter in laboratory experiments* (Vol. 814). Springer.

**More than seven authors::**

Bianco, A., Cheng, H. M., Enoki, T., Gogotsi, Y., Hurt, R. H., Koratkar, N., ... & Zhang, J. (2013). All in the graphene family—A recommended nomenclature for two-dimensional carbon materials. *Carbon*, 65, 1-6.

**The Reference is based on Type of Source**

**Book**

Bushong, S. C. (2020). *Radiologic Science for Technologists E-Book: Physics, Biology, and Protection*. Elsevier Health Sciences.

**Translation Book**

Ganong, W. F. (2008). Fisiologi kedokteran. Ed ke-22. (Petrus A., Penerj). Buku asli diterbitkan tahun 2005.

**Journal**

Alimah, S., & Dewita, E. (2008). Pemilihan teknologi produksi hidrogen dengan memanfaatkan energi nuklir. *Jurnal Pengembangan Energi Nuklir*, 10(2).

Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I., Sandford, R., & Education, B. P. (2009). The educational benefits claimed for physical education and school sport: an academic review. *Research papers in education*, 24(1), 1-27.

**Proceedings**

Svenska föreningen för grafisk databehandling. Konferens. (2008). *SIGRAD 2008: The Annual SIGRAD Conference: Special Theme: Interaction: November 27-28, 2008, Stockholm, Sweden: Conference Proceedings*. Linköping University Electronic Press.

**Article with DOI**

Khan, K. A., Çera, G., & Néték, V. (2019). Perception of the Selected Business Environment Aspects by Service Firms. *Journal of Tourism and Services*, 10 (19): 111-127. <https://doi.org/10.29036/jots.v10i19>.

**Theses/Dissertations**

Rivauzi, A. (2014). *Pemikiran Abdurrauf Singkel tentang Pendidikan dan Implikasinya pada Pondok Pesantren Nurul Yaqin Ringan-Ringan Pakandangan Padang Pariaman* (Doctoral dissertation, Institut Agama Islam Imam Bonjol Padang).

**Website**

Nama Website. Tanggal Artikel Dibuat. *Judul Artikel*. Waktu Diakses, URL web

Society for Biomaterials. 20 Mei 2022. *Ameer Wins 2022 Bioactive Materials Lifetime Achievement Award & 2022 Innovation Commercialization Award*. Diakses pada 9 Januari 2023,

<https://biomaterials.org/publications/news/ameer-wins-2022-bioactive-materials-lifetime-achievement-award-2022-innovation>

### **The Citation**

- **Single Author,**  
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at the end : (Bushong, 2020)
  
- **Two Authors,**  
at the beginning : Charlton & Hussey (1999)  
at the end : (Charlton & Hussey, 1999)
  
- **More than two authors,**  
at the beginning : Cherry, et al. (2012)  
at the end : (Cherry, et al., 2012)