Journal of Material Characterization and Applications, Vol. **X**, No. X, pp XX-XX (202X)

JMCA TEMPLATE: AN INTRODUCTION AND GUIDE

**Kaan Exampleaa\***

**Mary Examplebb**

a\* *Advanced Technology Research and Application Center, Adana Alparslan Türkeş Science and Technology University, Adana 01250, Turkey*

E-mail: konferanstanitim[@gmail.com](mailto:shnethem@itu.edu.tr), ORCID ID: 0000-0000-0000-0001

b *Second author affiliation and institutional adress*

E-mail: xxxxxxx[@gmail.com](mailto:shnethem@itu.edu.tr), ORCID ID: 0000-0000-0000-0002

Received X October 202X; revised X0 December 202X; accepted XX December 202X

**Abstract**

The ZN-chopped strands compound formed in various weights, and epoxy resin were used to fabricate microwave shielding effectiveness composites. Utilizing a network analyser, the microwave shielding effect of ZN/chopped strands composites were investigated in the range of 0-18 GHz. At a thickness of 1.5 mm, a minimum of -XXX dB shielding efficacy value was achieved at XX GHz. The ZN-chopped strands compounds were produced as composite and their features were characterized for shielding effectiveness. The content of components in the samples may be managed for the larger and needed frequency bands to change the microwave shielding effect performance. The ZN-chopped strands compound formed in various weights, and epoxy resin were used to fabricate microwave shielding effectiveness composites. Utilizing a network analyser, the microwave shielding effect of ZN/chopped strands composites were investigated in the range of 0-18 GHz. At a thickness of 1.5 mm, a minimum of -XX dB shielding efficacy value was achieved at XXX GHz. The ZN-chopped strands compounds were produced as composite and their features were characterized for shielding effectiveness. The content of components in the samples may be managed for the larger and needed frequency bands to change the microwave shielding effect performance.

A concise English abstract (no more than 270 words), followed by a list of three to five keywords.

**Keywords:** keywords, separated by semicolons

# 1. Introduction

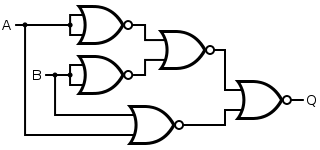
Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially. Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially. Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially. Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially. Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially [1], [2], [3].

**2. Figure in Template**

Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially [4]. Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially. Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially [5]. Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially. Please follow the indications in the subsequent sections in order to carefully ensure that your paper complies with the JMCA journal template. Sections are numbered sequentially [6].

*2.1. Design-1*

Figures must be placed beneath the image, and figures must be centered. Text width cannot be greater than image width. No text in an image may be larger than the paper's main body text. Figure 1 shows an illustration of this recommendation. Figures should be positioned as near to the text that references them as feasible, at the top or bottom of the page. Writers ought to refrain from utilizing figures on the opening page [7-8] (Figure 2).



# Fig. 1. Example of figure of a digital circuit.

# 

# Fig. 2. SEM image of ZN at x 5000.

**3. Tables**

# As shown in Table 1, tables have to be centered and captions placed above the table. Both vertically and horizontally, text in a cell should be centered. Similar to figures, tables ought to be positioned at the top or bottom of pages, as near as feasible, to the text that refers to them. Tables on the first page should not be included by authors.

# Table 1. Example of table.

|  |  |  |
| --- | --- | --- |
| **Column 1 Head** | **Column 3 Head** | **Column 3 Head** |
| 1 | 2 | 3 |
| 4 | 5 | 6 |
| 7 | 8 | 9 |

**4. Conclusions**

This composite’s shielding effect and reflection loss in higher frequency ranges may be investigated. Microwave shielding effect capabilities of chopped strands based ZN composites may be investigated for a larger range of constituent contributions. The chopped strands-ZN composite is a promising for microwave shielding throughout a broad frequency band. For future research, the synthesis of chopped strands with ZN composite composition can be researched in more depth with different additives and ratios. In order to improve the microwave shielding effect, chopped strand-ZN composite are being employed. In radar frequency and higher frequency ranges, the shielding effect and reflection loss of this composite with various dopants materials might be explored. Thanks to xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx and flexible structure and wide bandwidth.

# Acknowledgements (Sample)

In honor of Prof. Dr. Ayhan Mergen, who passed away in 2017, Mr. Salim Şahin (died in 2014) this work was made. For their assistance, we would like to thank Advanced Techology and Application Center at Adana Alparslan Türkes Science and Technology University. Besides, we would like to thank İstanbul Technical University Electrical-Electronics, Electronics and Communication Engineering, Marmara University Metallurgical and Materials Engineering.

# Sample References

* 1. A. F. Qasrawi, A. A. Hamarsheh, Structural, optical and electrical properties of band-aligned CdBr2/Au/Ga2S3 interfaces and their application as band filters suitable for 5G technologies, J. Electronic Materials **32**, 1-12 (2022).
  2. E. İ. Sahin, Microwave electromagnetic shielding effectiveness of ZnNb2O6-chopped strands composites for radar and wideband (6.5-18 GHz) applications, Lith. J. Phys. **62**(3), 161-170 (2022).
  3. A. F. Qasrawi, E. İ. Sahin, M. Emek, M. Kartal, and S. Kargin, Structural and dielectric performance of the Ba(Zn1/3Nb2/3-xSbx)O3 perovskite ceramics, Materials Research Express **6**, 095095 (2019).
  4. Th. Foerster, in: Modern Quantum Chemistry, Vol. 3, ed. O. Sinanoglu (Academic Press, New York, 1965) pp. 93–137.
  5. E. İ. Şahin, M. Emek, J. E. F. M, Instrumental Measurements Laboratory, 1st ed. (Iksad Publishing House, Ankara, 2023).
  6. E. İ. Şahin, M. Emek, J. E. F. M. Ibrahim, CuO/panı/Kolemanit kompozitlerin geniş bant elektromanyetik ekranlama etkinliği. E. Orhan, E. Seven (Ed.), Teoriden Uygulamaya Fizik ve Matematik Alanında Çalışmalar içinde (115-133 ss.). Ankara: Iksad Publishing House (2022).
  7. Emek, M., Şahin, E. (Ed.). Current studies at positive sciences (1st ed.). Ankara: Iksad Publishing House (2020).
  8. Kartal, M. Mikrodalga difraksiyon tomografisi için yeni bir paralel işleme algoritması. Yüksek Lisans Tezi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, İstanbul-Türkiye (1993).
  9. Kartal, M. A new parallel processing algorithm for microwave diffraction tomography. Master’s Thesis, Istanbul Technical University, Institute of Science, Istanbul-Turkey (1993).