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| Book Name: | [**Physical Science: New Insights and Developments**](https://bookstore.bookpi.org/product/physical-science-new-insights-and-developments-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_6033** |
| Title of the Manuscript:  | **High power piezoelectric characterization system (HiPoCS™)** |
| Type of the Article | **Book Chapter** |

**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form**

**with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following**

 **journal.**

**FERROELECTRICS, 569(1): 21–49, 2020.**

**Available:** [**https://doi.org/10.1080/00150193.2020.1791664**](https://doi.org/10.1080/00150193.2020.1791664)

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| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | The problem in the voltage-constant admittance measurement with a conventional “impedance analyzer” at the resonance; is, scewed spectrum peak and spectrum hysteresis with an increase in applied voltage. Thus, current-constant admittance measurement was proposed for obtaining symmetrical spectrum peak. For improving the determination accuracy of 𝑄A and 𝑄B simultaneously, the methodology “voltage/current measurement under constant vibration velocity” with sweeping the frequency is discussed in this work along with losses and its measuring techniques.  |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | Yes. It is OK |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **Abstract is enough** |  |
| **Is the manuscript scientifically, correct? Please write here.**  | **Yes. the manuscript correct scientifically.** The issues in the high-power characterization include the resonance peak spurious problem in the 𝑘33 and 𝑘15 mode specimens on the admittance/impedance spectrum due to the mode-coupling. This work introduce a sort of ‘electromechanical coupling loss’ with the measuring techniques using the impedance/admittance curves. The system is equipped with an infrared image sensor to monitor the heat generation distributed in the test specimen.  |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | **References are no sufficient and recent publications should be included**1. P Geetha and R S Jothiprashanth, “Low-cost Energy Harvesting using ZnO Nanorods on Paper Substrate”, [ECS Journal of Solid State Science and Technology](https://iopscience.iop.org/journal/2162-8777), [Volume 11](https://iopscience.iop.org/volume/2162-8777/11), [Number 10](https://iopscience.iop.org/issue/2162-8777/11/10), IOP Publishing Limited, 2022. <https://doi.org/10.1149/2162-8777/ac9335>
2. Geeta P., "Modeling of ZnO Nanorods on Paper Substrate for Energy Harvesting", IJEER 10(4), 954-957, 2022. DOI: 10.37391/IJEER.100433.
3. S. Muthukaruppasamy, P. Geetha, V. Rajagopal, P. Duraipandy, "Modeling of Energy Generation Using Piezoelectric Material for Wearable Devices," *SSRG International Journal of Electrical and Electronics Engineering*, vol. 10,  no. 9, pp. 102-111, 2023. *Crossref,* <https://doi.org/10.14445/23488379/IJEEE-V10I9P110>
4. Geetha P, “Energy Harvesting using ZnO Nanorods for Wearable Devices”, IEEE International Conference on Cybernetics, Cognition & Machine Learning Applications -ICCCMLA 2022, 8-9 October 2022.
5. Geetha P, Satyam Satyam, R Jothiprashanth, “Modelling of Energy scavenging from rolling tyres using contact-separation mode Triboelectric nano generators for Self powered Electric Vehicles 2024-28-0058, SAE Technical Paper, 2024
6. P Geetha, R Jothiprashanth, Satyam, “[Modelling of vibrational energy collection for Self powered Electric Vehicles using soft-contact Triboelectric nanogenerator](https://scholar.google.com/scholar?oi=bibs&cluster=13010794277343660418&btnI=1&hl=en)”, 2024-28-0065, SAE Technical Paper, 2024
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| Is the language/English quality of the article suitable for scholarly communications? | Yes, Communication is ok |  |
| Optional/General comments | The paper needs 1. Introduction of the chapter at the beginning with its significance and the summary that justifies the content.
2. Other arguments and discussion found good.
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| **PART 2:**  |
|  | Reviewer’s comment | Author’s comment *(if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in detail)*No.There is no unethical issues |  |

**Reviewer details:**

**P.Geetha, Mohan Babu Universitry, India**