

Review Form 3

Journal Name:	Advances in Research
Manuscript Number:	Ms_AIR_123733
Title of the Manuscript:	Research progress on electrical and mechanical properties of self-sensing concrete
Type of the Article	Opinion Article

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	This manuscript is important for the scientific community as it reviews the development of self-sensing concrete, a crucial innovation for structural health monitoring and infrastructure longevity. It provides a comprehensive overview of the material's properties, conductive mechanisms, and influencing factors, making it a valuable resource for researchers in this growing field.	
Is the title of the article suitable? (If not please suggest an alternative title)	Yes	
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.	The abstract is somewhat comprehensive but lacks conciseness. Additionally, reducing the amount of background information would make room for more important content related to the paper's core contributions.	
Are subsections and structure of the manuscript appropriate?	Yes	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The authors have thoroughly covered key aspects such as conductive mechanisms, functional fillers, and the factors influencing performance, which demonstrates a solid understanding of the field. The manuscript draws on a wide range of literature and incorporates multiple studies to provide a balanced and well-researched overview. In the section below, detailed comments from the reviewer are provided.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	Author needs to add more recent literature information	

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Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications?	Major revision	
Optional/General comments	<p>The manuscript discusses the development and properties of self-sensing concrete, an emerging material that integrates load-bearing and sensing functions, offering significant benefits for structural health monitoring. While the manuscript covers a broad range of topics, including conductive mechanisms and influencing factors, several areas need improvement to make the paper more coherent, impactful, and aligned with scientific standards.</p> <ol style="list-style-type: none">1. The paper provides an extensive review of self-sensing concrete, but the flow feels disconnected at times. For example, transitions between different sections (such as from the historical background to the discussion on conductive mechanisms) could be more seamless. Consider adding linking paragraphs to guide the reader through the various themes.2. The historical development of smart concrete is covered comprehensively, but it would benefit from a sharper focus. For instance, discussing the broader context (i.e., why self-sensing concrete matters for modern infrastructure challenges) earlier in the introduction would help set the stage more effectively.3. In the section "Self-Sensing Concrete Composition," the discussion on matrix materials and functional fillers is informative. However, it would be helpful to more explicitly address the limitations of certain fillers, such as carbon nanotubes, including challenges like cost and environmental impact, which are only mentioned tangentially.4. The conclusion is concise but too general. There is a lack of specific recommendations for future research, despite this being a review paper. It would be beneficial to suggest more targeted areas for future exploration, such as the development of more sustainable or cost-effective functional fillers or the application of self-sensing concrete in specific industries.	

PART 2:

	Reviewer's comment	Author's comment (if agreed with 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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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