

[Review Form3](#)

Book Name:	<a href="#">Science and Technology: Developments and Applications</a>
Manuscript Number:	Ms_BPR_3925
Title of the Manuscript:	EXPERIMENTAL DEVICE TO EVALUATE MINERAL TRAPPING IN SANDSTONES AS A MEANS OF SUPERCRITICAL CO <sub>2</sub> (scCO <sub>2</sub> ) STORAGE
Type of the Article	Book chapter

**PART 1: Comments**

	Reviewer's comment	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)
<b>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.</b>	This manuscript provides a well-structured and scientifically sound analysis of CO <sub>2</sub> sequestration in geological formations, which is highly relevant to the global challenge of mitigating climate change. The research focuses on innovative methods such as mineral carbonation and CO <sub>2</sub> injection, offering valuable insights into the long-term storage potential of CO <sub>2</sub> . Given the increasing interest in carbon capture and storage (CCS) technologies, this manuscript contributes significantly to the scientific community by advancing our understanding of effective geological CO <sub>2</sub> storage solutions. Its findings will be essential for future research and practical applications in climate change mitigation strategies.	
<b>Is the title of the article suitable? (If not please suggest an alternative title)</b>	The title is clear, scientifically accurate, and effectively conveys the study's focus. However, I recommend changing "mineral trapping" to "mineral sequestration," as it is a more widely recognized and precise scientific term in this context.	
<b>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.</b>	The abstract is informative and highlights the study's relevance in addressing climate change through CO <sub>2</sub> storage. However, there are minor grammatical and phrasing issues to improve readability and scientific clarity. <ol style="list-style-type: none"> <li>1. Replace "CO<sub>2</sub> capture and storage" with "CO<sub>2</sub> capture and storage (CCS)" for correct chemical notation.</li> <li>2. Correct "tightness of CO<sub>2</sub>," to "tightness of CO<sub>2</sub>."</li> <li>3. Suggest revising "mineralization trap mechanism or mineral sequestration" to consistently use "mineral sequestration" for uniform terminology.</li> <li>4. Replace "store" with "storage site" for clarity.</li> <li>5. Rephrase "work" to "study" for a more scientific tone.</li> <li>6. Update "saturation by injection and in reactor" to "saturation by injection and reactor experiments" for smoother phrasing.</li> </ol>	
<b>Is the manuscript scientifically, correct? Please write here.</b>	The manuscript is scientifically accurate, well-written, and presents a clear methodology. The results and discussions are thorough, providing valuable insights into CO <sub>2</sub> injection and mineralization in sandstone aquifers.	
<b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b> =	The references in the manuscript are generally sufficient and relevant. However, some older references could be replaced with more recent studies to better reflect the current research. For example: <ol style="list-style-type: none"> <li>7. Broecker, W.S. (2000). <i>Climate change - CO<sub>2</sub> arithmetic</i>. Science, 315(5817), 1371-1371. [DOI: 10.1126/science.1139585]</li> <li>8. Seifritz, W. (1990). <i>CO<sub>2</sub> Disposal By Means of Silicates</i>. Nature, 345(6275), 486. [DOI: 10.1038/345486b0]</li> </ol>	

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	<p>These older references could be substituted with more recent studies like:</p> <ul style="list-style-type: none"> <li>• Sigfússon, B., et al. (2010). <i>Mineral Sequestration of carbon dioxide in basalt: A pre-injection overview of the CarbFix project</i>. International Journal of Greenhouse Gas Control, 4(3), 537-545. [DOI: 10.1016/j.ijggc.2009.11.013]</li> <li>• Valle, L.M., et al. (2018). <i>Effects of supercritical CO2 injection on sandstones wettability and capillary trapping</i>. International Journal of Greenhouse Gas Control, 78, 341-348. [DOI: 10.1016/j.ijggc.2018.09.005]</li> </ul> <p>This update will ensure that the manuscript includes more current references, enhancing its relevance to the field.</p>	
<b>Is the language/English quality of the article suitable for scholarly communications?</b>	The language and English quality of the article are generally good. However, there are some minor grammar mistakes. I recommend checking the manuscript with a grammar tool like Grammarly to ensure a higher level of accuracy and clarity.	
<b>Optional/General</b> comments	The manuscript provides a thorough and well-structured review of the topic. The content is relevant and addresses key aspects of the subject matter effectively. I recommend a final proofreading to enhance clarity and correct minor grammatical errors. Overall, it is a valuable contribution to the field.	

**PART 2:**

	<b><u>Reviewer's comment</u></b>	<b><u>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)</u></b>
<b><u>Are there ethical issues in this manuscript?</u></b>	<b><u>(If yes, Kindly please write down the ethical issues here in details)</u></b>	

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