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| Book Name: | **Proceedings of the 8th International Conference on Solidification and Gravity** |
| Manuscript Number: | **Ms\_BPR\_** **3590.1** |
| Title of the Manuscript: | **Flow and concentration stratification, segregation channels, and sliding-down of crystalline regions in a solidifying aqueous ammonium chloride solution** |
| Type of the Article | **BOOK CHAPTER** |

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| PART 1: Review Comments | | |
| Compulsory REVISION 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)* |
| **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.** | **The work is good, this paper discusses the formation of a concentration and flow stratification by interdendritic flow channels, the appearance of clouds of tiny crystals that follow the meandering flow pattern, and the larger crystals that directly sink along the vertical mushy zone layer.**  **Good work, these findings are based on both experimental observations and numerical simulations using an aqueous ammonium chloride solution subject to side cooling. Occasionally, these crystals adhere to exposed areas of the vertical mushy layer, causing crystal agglomeration. When they get too large, they further collapse. As a result, an uneven sedimentation layering emerges and the sedimentation in such big test cells seems irregular.** |  |
| **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. | **Yes,** the abstract of the article comprehensive. No need to change it. |  |
| **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.** | **This work is trustworthy and rigorously scientific. Its unique and creative research style offers an original viewpoint on the area. In the meantime, the study's data collecting and analysis procedures adhered to scientific guidelines to guarantee the precision and validity of the findings** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | **YES** |  |
| Minor REVISION commentsIs the language/English quality of the article suitable for scholarly communications? | **Acceptance is advised following minor fixes. There are a few grammatical errors, and the article's research technique has to be improved and included in the comprehensive steps of the methodological design.** |  |
| Optional/General comments |  |  |

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| **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?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |

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| **Reviewer Details:** | |
| Name: | **Ranjit Barua** |
| Department, University & Country | **OmDayal Group of Institution, India** |