



Delft University of Technology

Leaching and efflorescence of alkali-activated slag materials

A multi-scale experimental and simulation study

Liu, C.

DOI

[10.4233/uuid:5dc64875-580c-4e3f-9c63-5aeef70d4b8c](https://doi.org/10.4233/uuid:5dc64875-580c-4e3f-9c63-5aeef70d4b8c)

Publication date

2025

Document Version

Final published version

Citation (APA)

Liu, C. (2025). *Leaching and efflorescence of alkali-activated slag materials: A multi-scale experimental and simulation study*. [Dissertation (TU Delft), Delft University of Technology].
<https://doi.org/10.4233/uuid:5dc64875-580c-4e3f-9c63-5aeef70d4b8c>

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

Propositions

Accompanying the dissertation

Leaching and Efflorescence of Alkali-activated Slag Materials

— A multi-scale experimental and simulation study

By

Chen Liu

1. Under aqueous conditions, alkali-activated slag (AAS) materials are prone to leaching and cracking. (This proposition pertains to this dissertation.)
2. Minimising alkali usage, enhancing surface hydrophobicity, and ensuring a dense crack-free matrix are effective methods in efflorescence mitigation. (This proposition pertains to this dissertation.)
3. The scientific level of a country depends not only on the average quality of its researchers but significantly on the excellence of its leading ones.
4. Authentic scientific advancements rarely come from the “clever” people, who dismiss investing effort in uncertain pursuits.
5. Only the weak complain about their circumstances, the strong adapt and seek to change them.
6. Arrogance is the chain for intellectuals that anchors them from monumental achievements.
7. Heavy sword has no edge, great wisdom seems silly. (Laozi, *Tao Te Ching*)
8. If you want to go fast, go alone. If you want to go far, go together.
9. The roots of all goodness lie in the soil of gratitude.
10. The final height of our lives is the height of a bed.

These propositions are regarded as opposable and defendable, and have been approved as such by the promoters Prof. Guang Ye and Prof. Erik Schlangen.