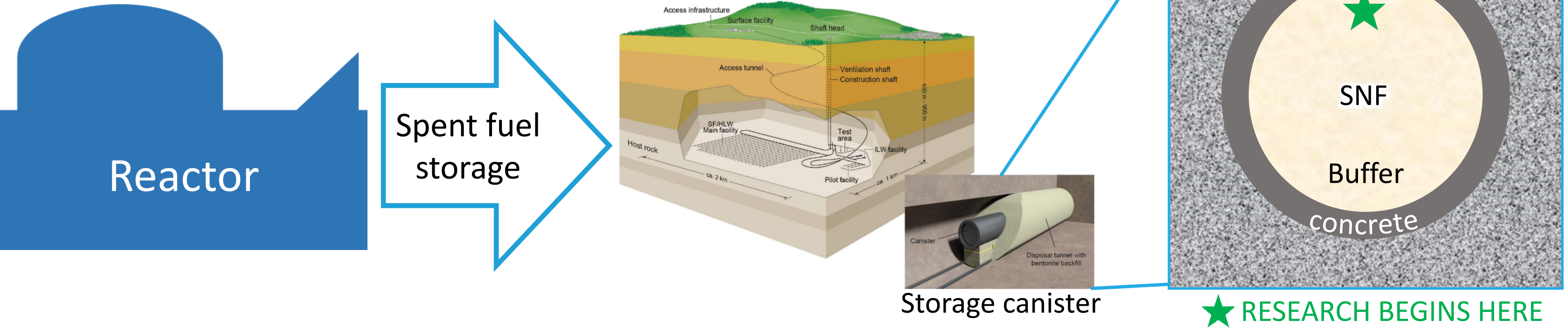
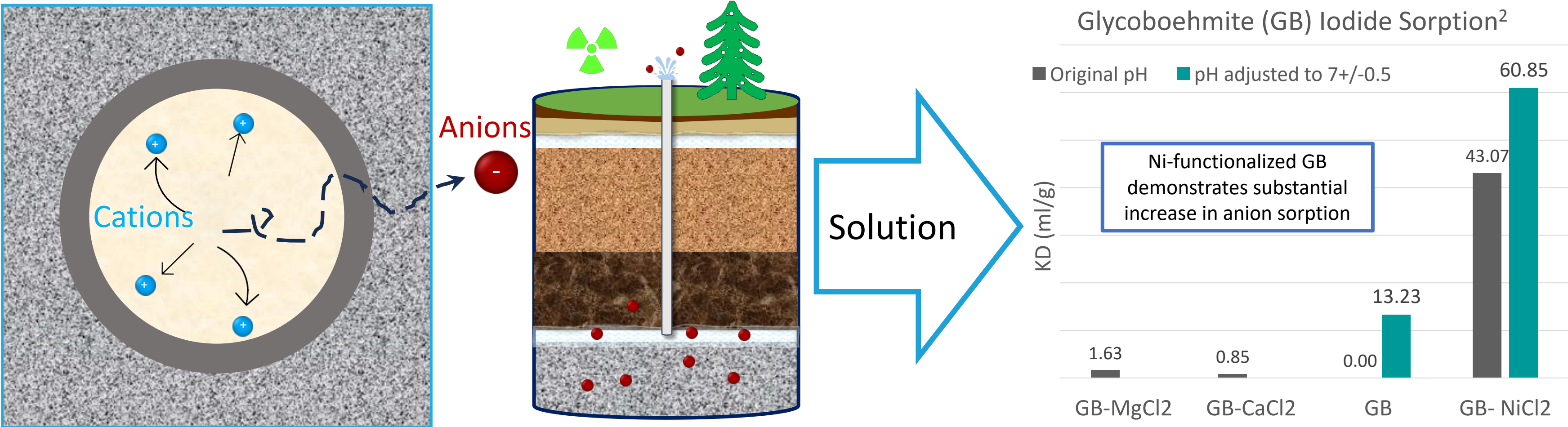


Deep geological disposal of spent nuclear fuel (SNF)




Challenge. Current buffer material has poor capture ability for high mobility anionic radionuclides.

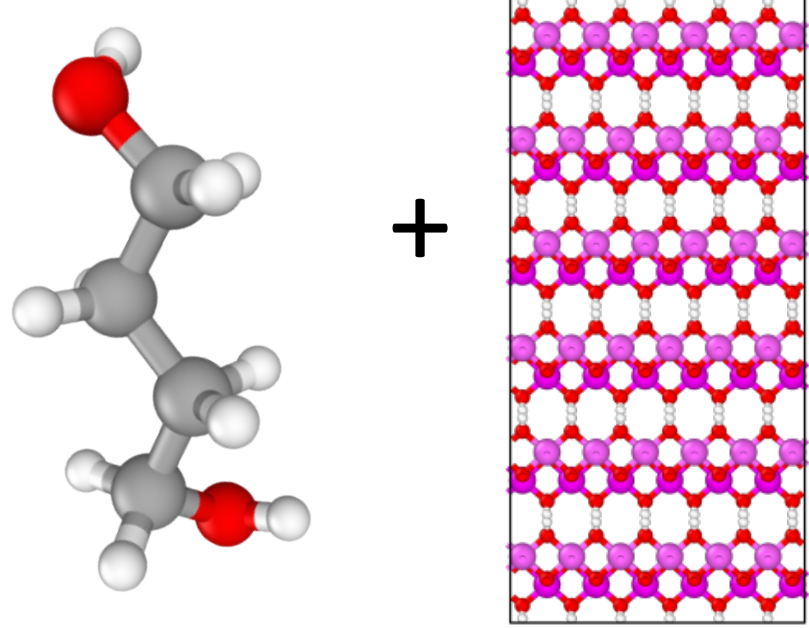


Goal. Design anion sorbents that are compatible with EBS seal systems and stable under repository conditions.

Methods



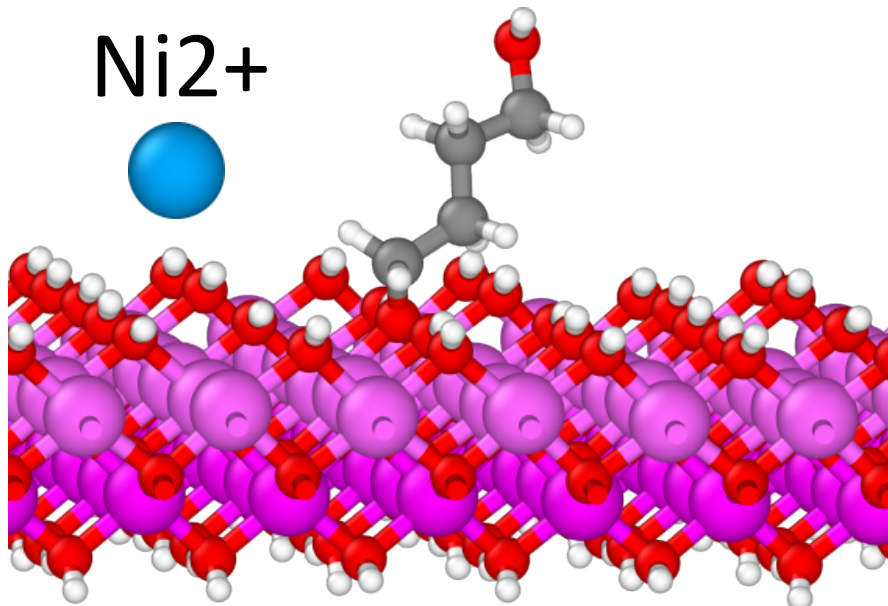
1,4-butanediol (glycol) + γ -AlOOH (boehmite) + Ions



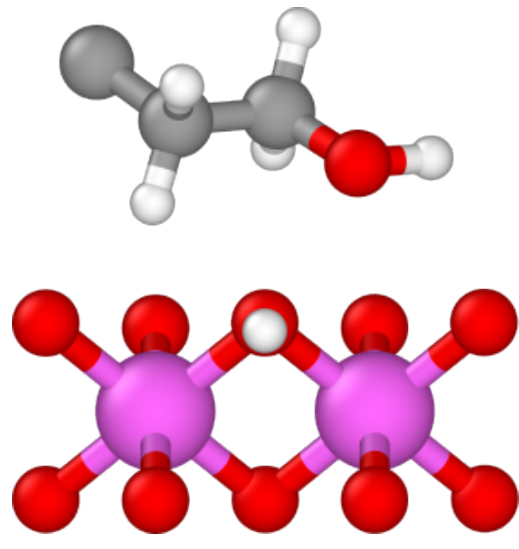
Ions: K^+ , Cl^- , I^- , Ni^{2+}

Results

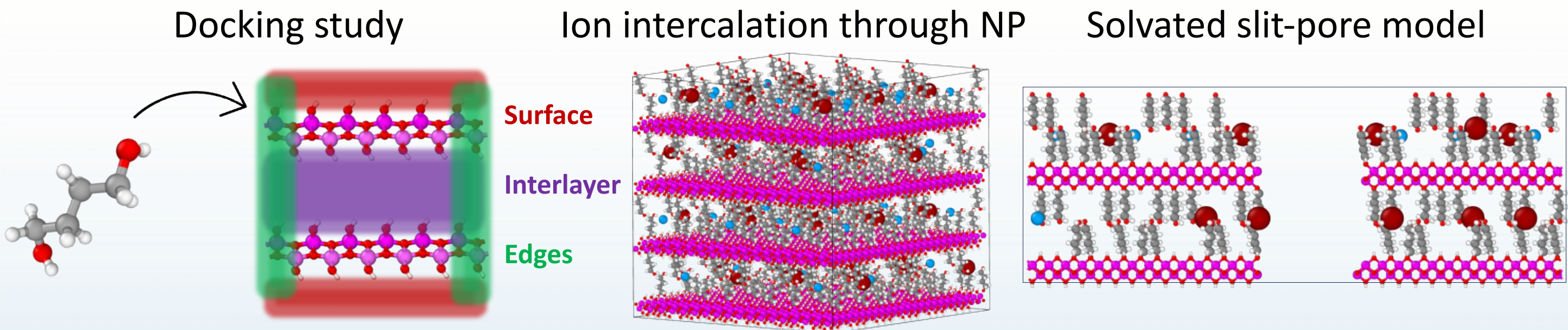
Parameter development



Reactive templates



Future Work



Bibliography

- Sellin, P. and Leupin, O.X. (2013) The Use of Clay as an Engineered Barrier in Radioactive-Waste Management -- A Review. *Clays Clay Miner.*, 61, 477-498.
- Kruichak, J. et. al., Anionic Contaminant Capture using Nickel-functionalized Glycoboehmite (in prep).