Speciation at high molality

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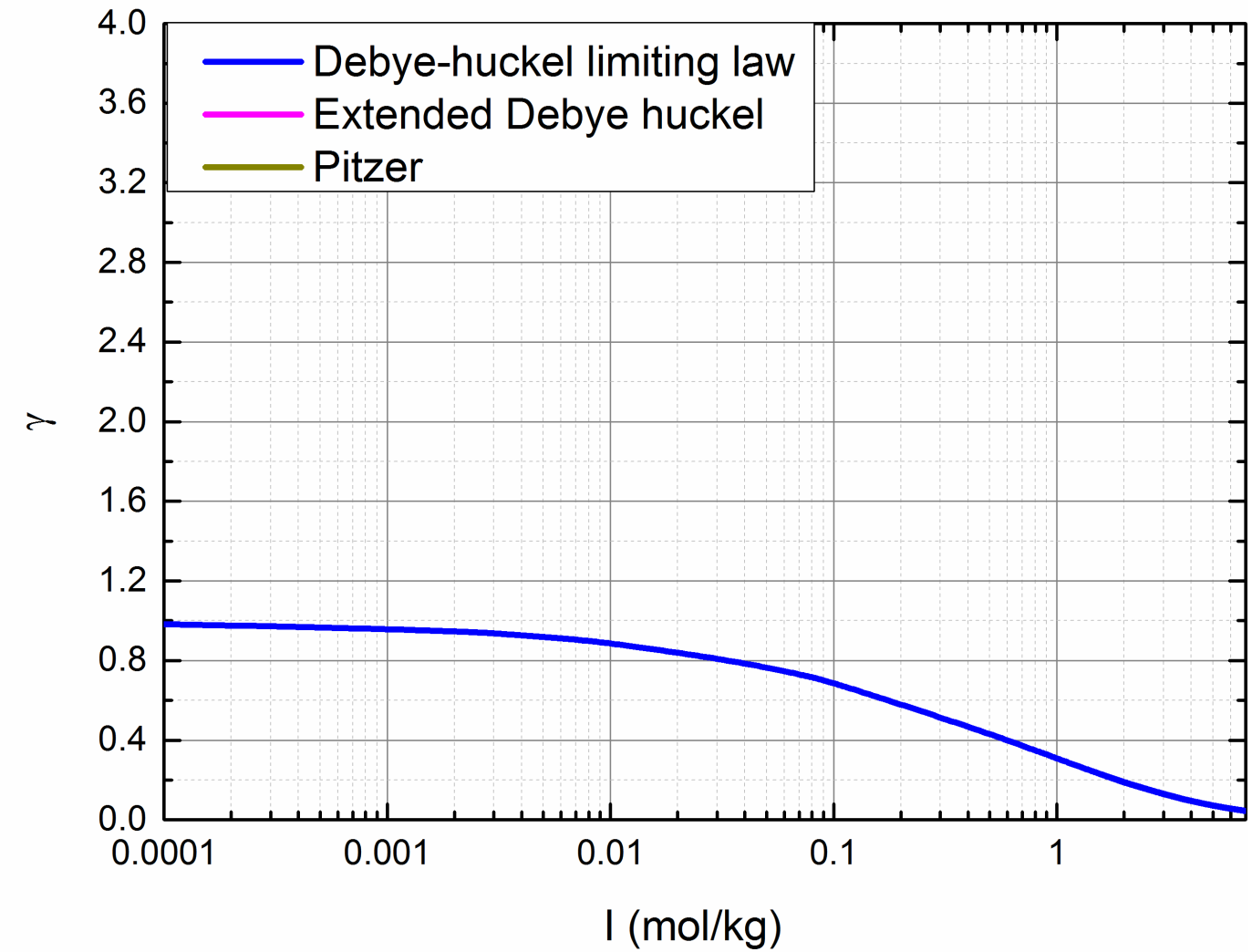
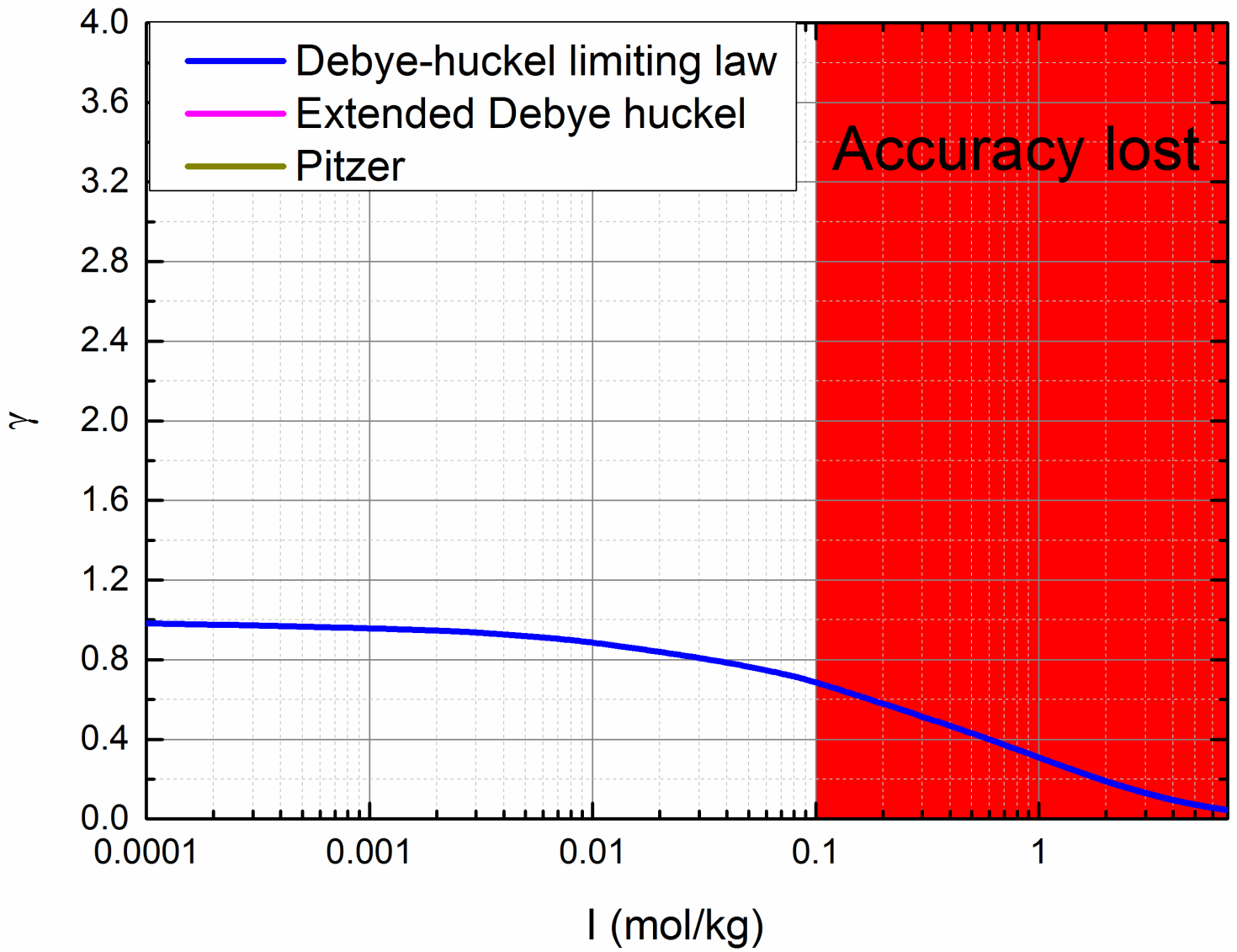
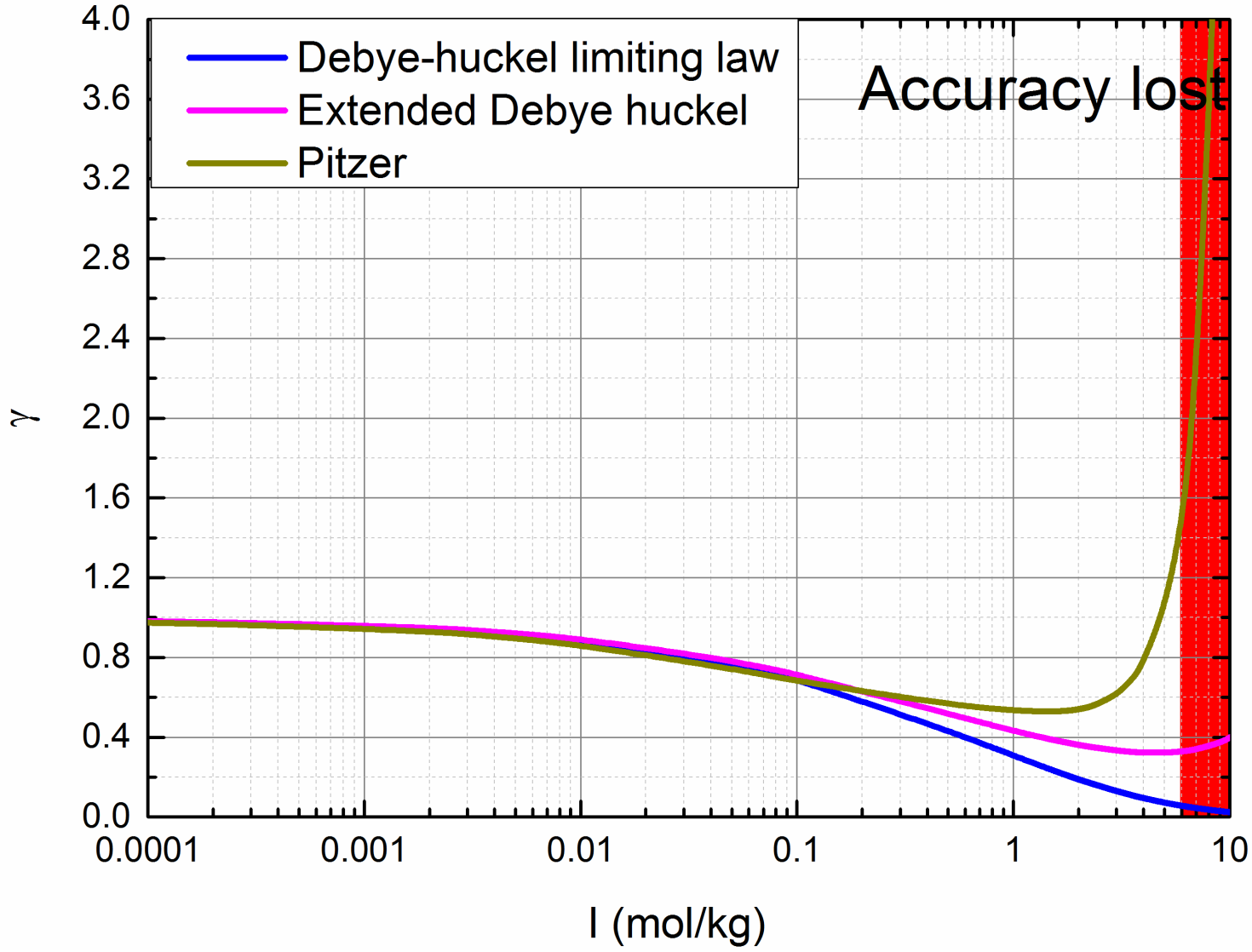
Chemical activity models



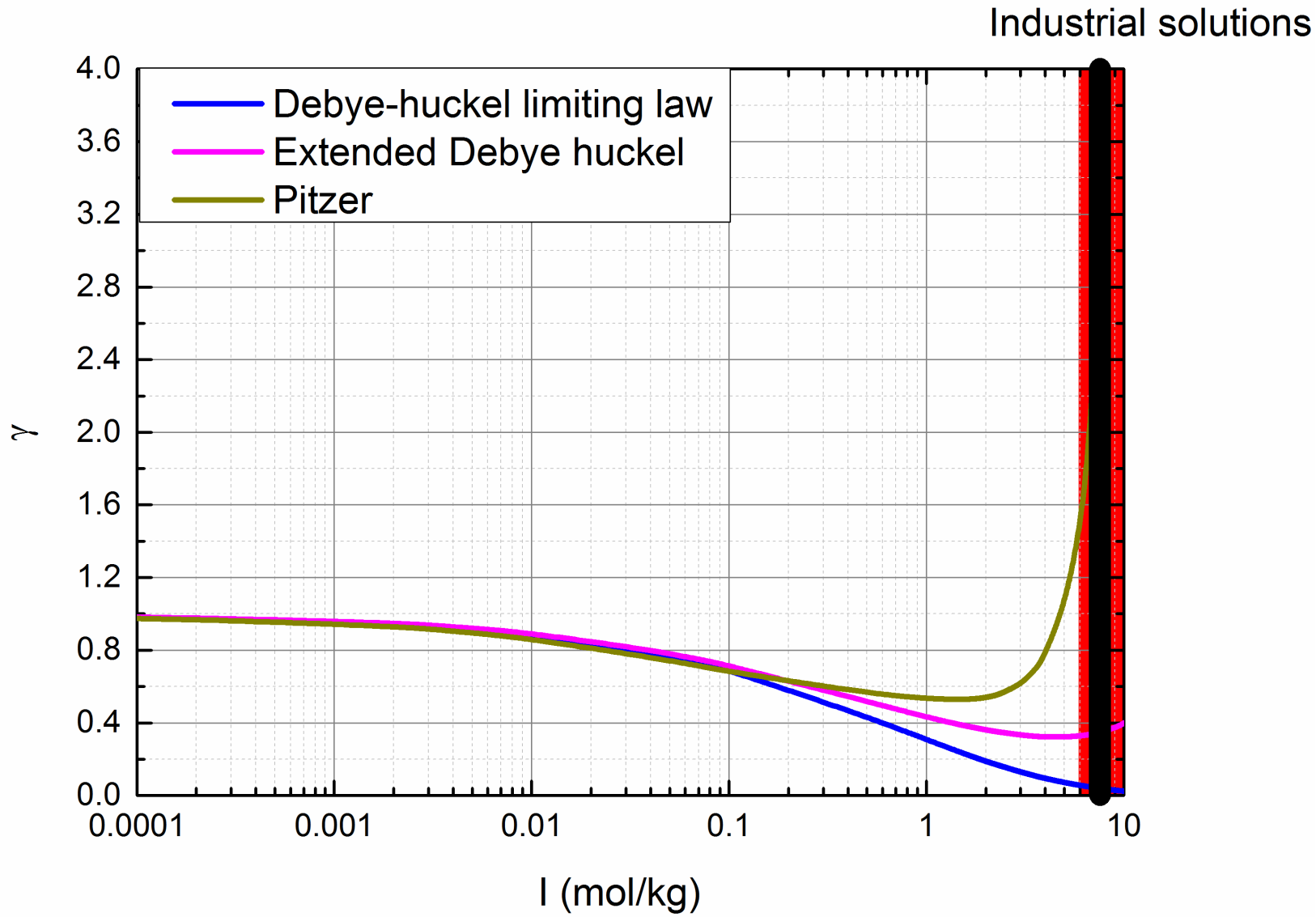
Chemical activity models



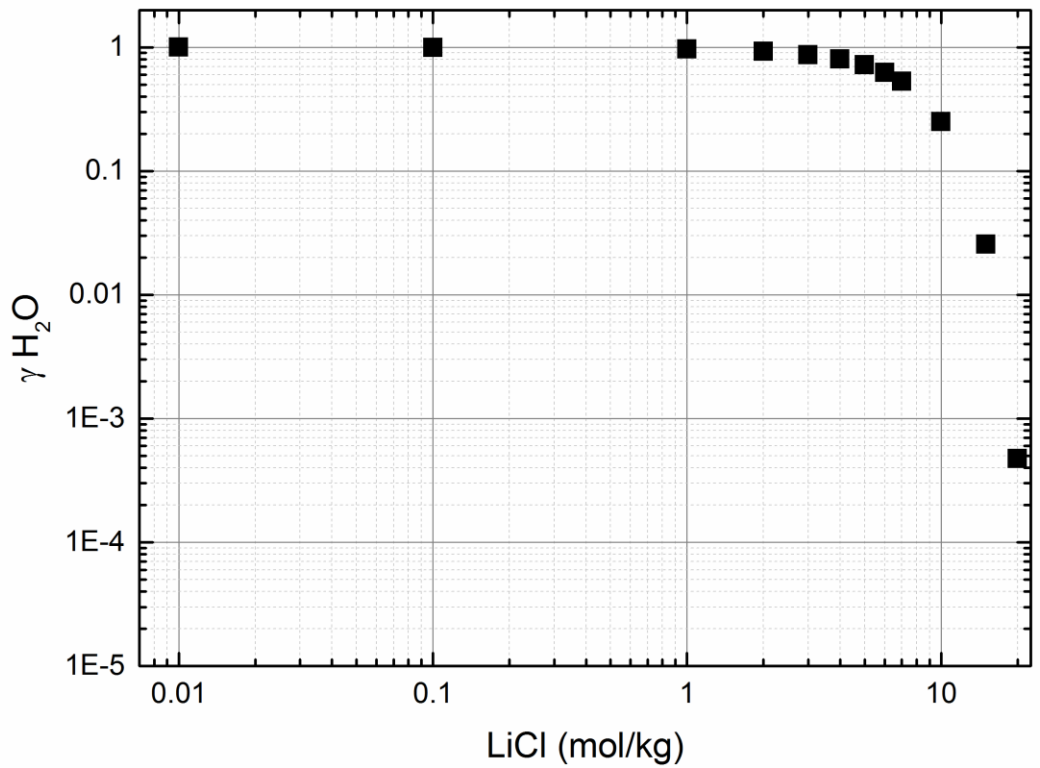
Chemical activity models



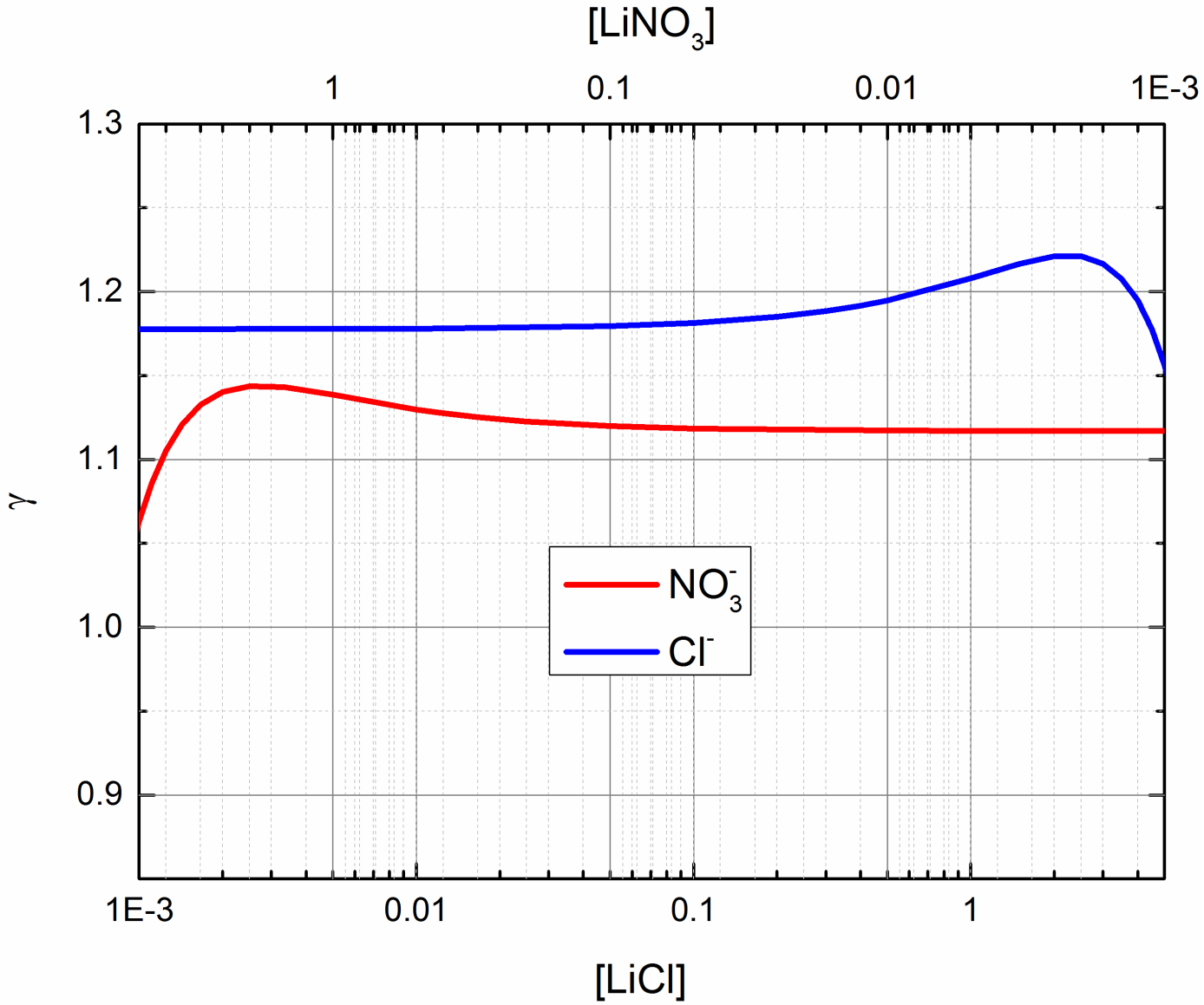
Chemical activity models



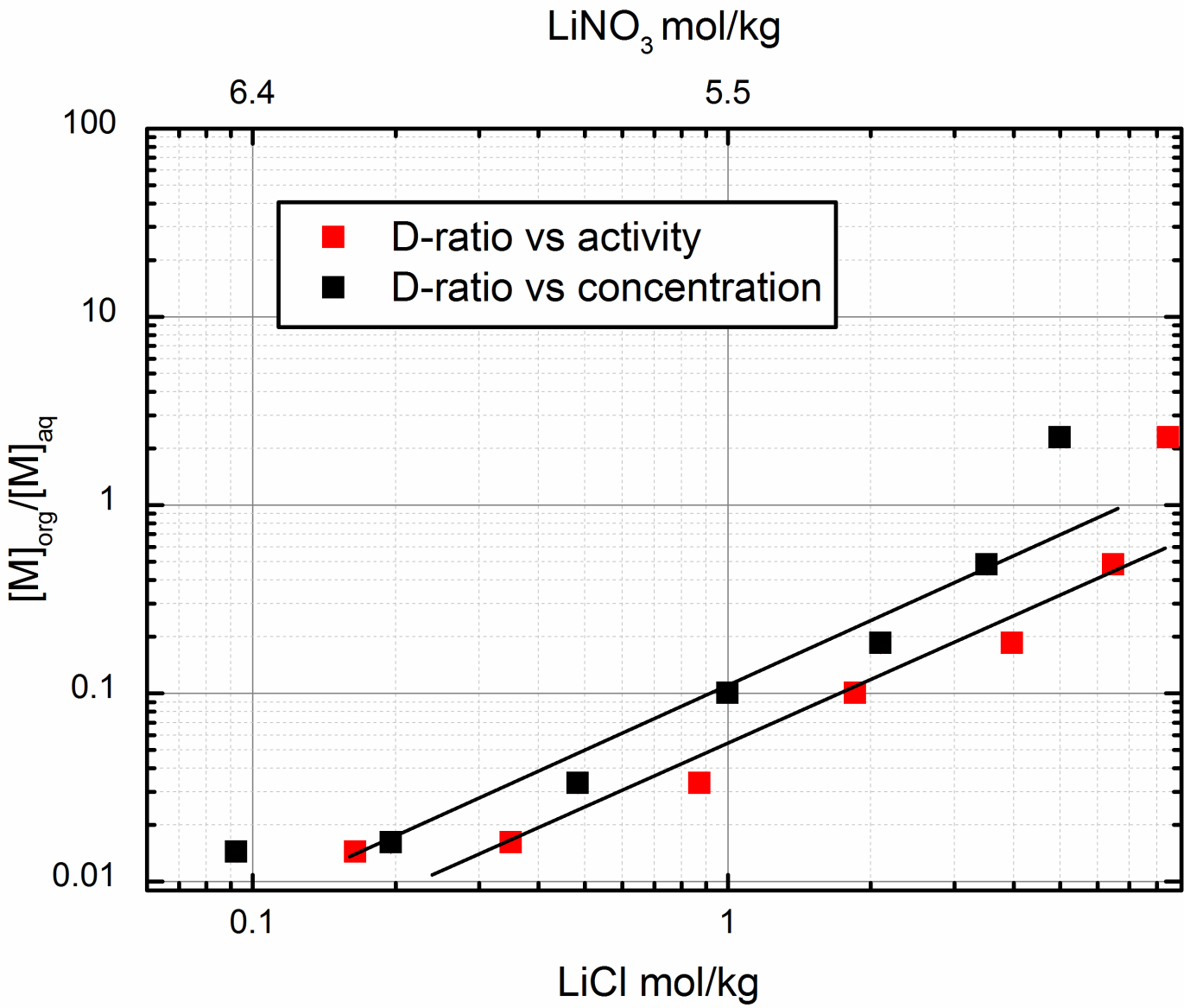
The activity of the solute will also change



But with mixed solutions it becomes difficult as it is not possible to assume that ions have equal activity



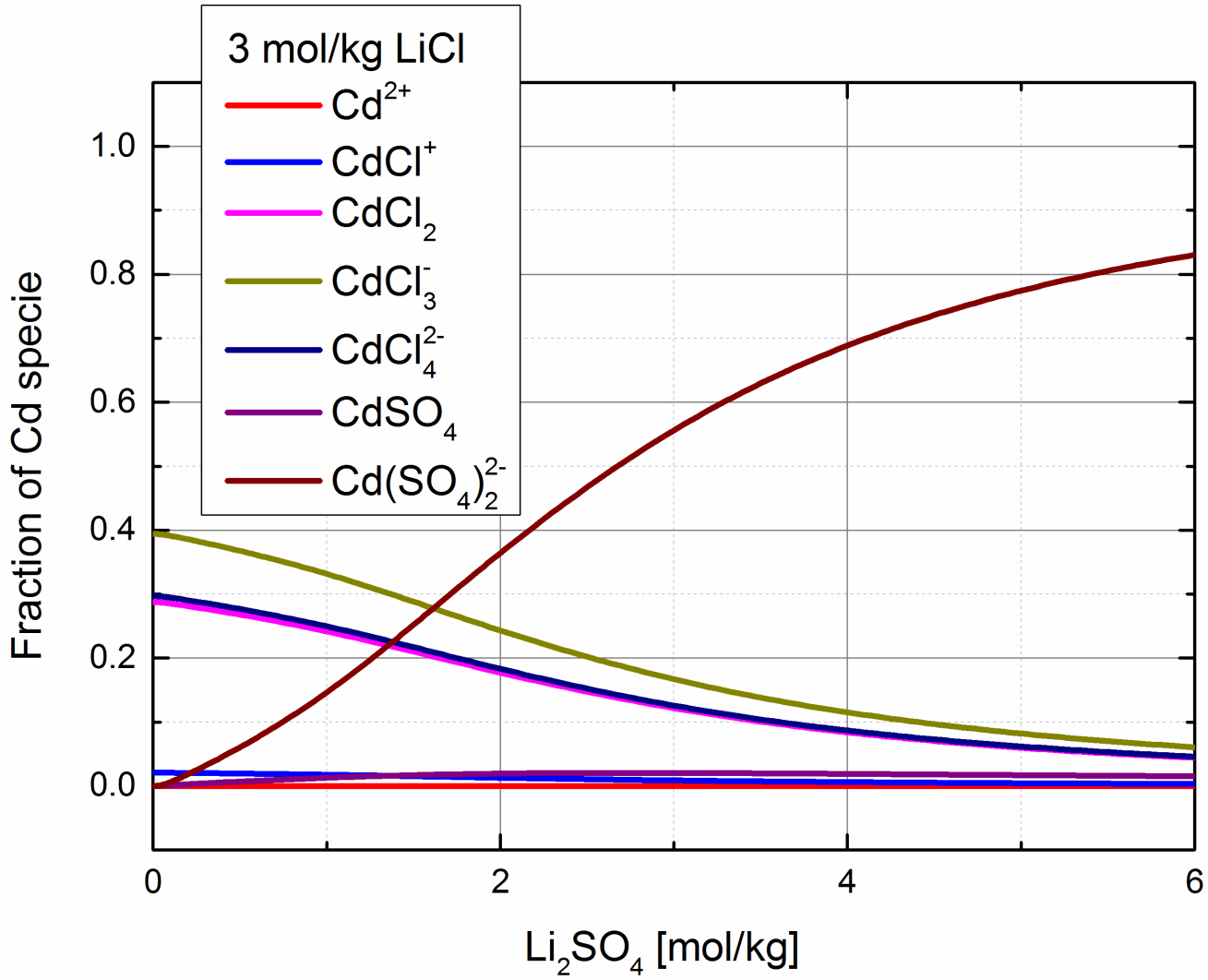
The changes in activity affects the extraction



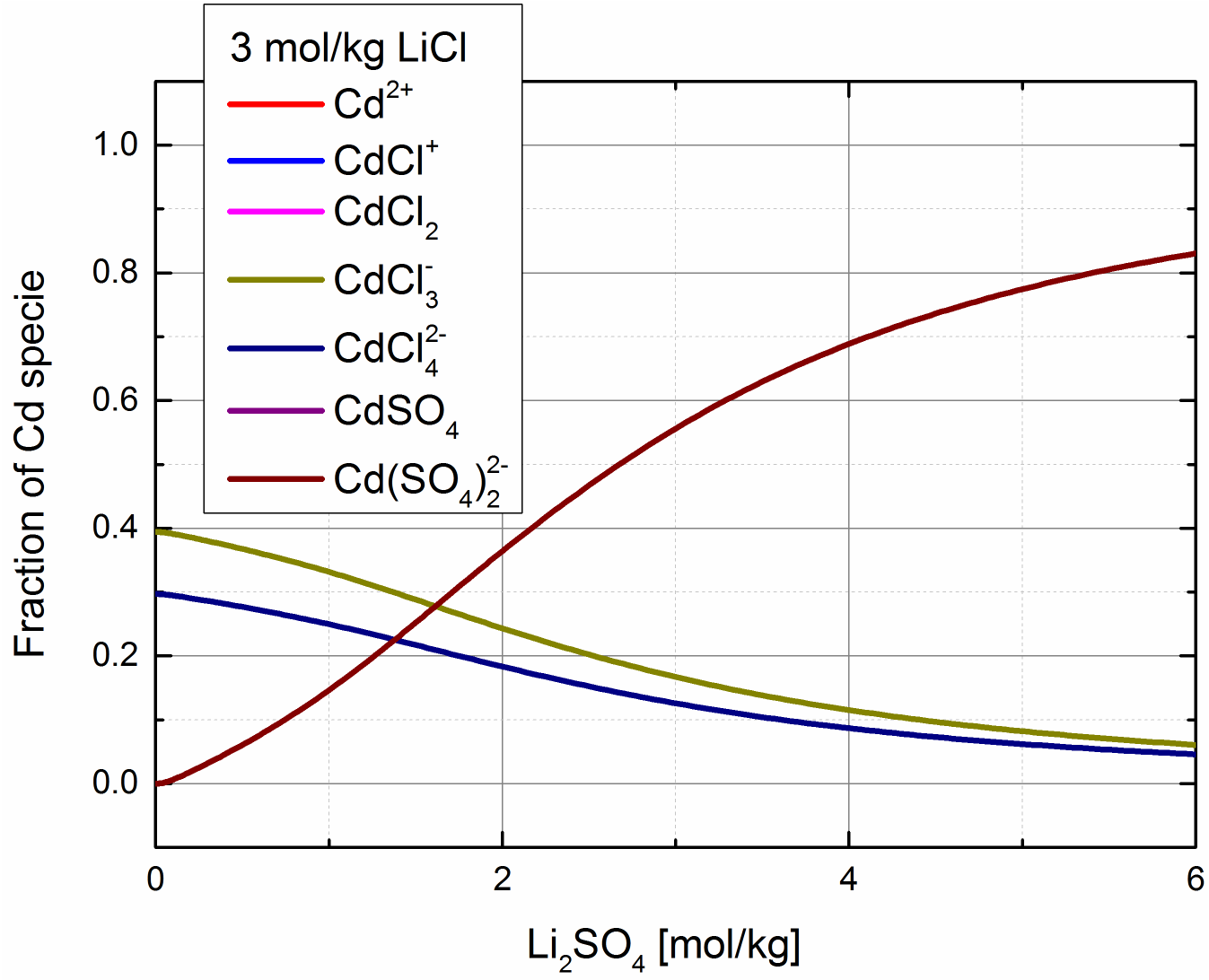
How will the activity affect my experiments

$$K = \frac{[A_a B_b]^{ab} \gamma_{ab}^{ab}}{[B]^b \gamma_b^b [A]^a \gamma_a^a}$$

Having two ligands in the solution leads to competition



Having two ligands in the solution leads to competition



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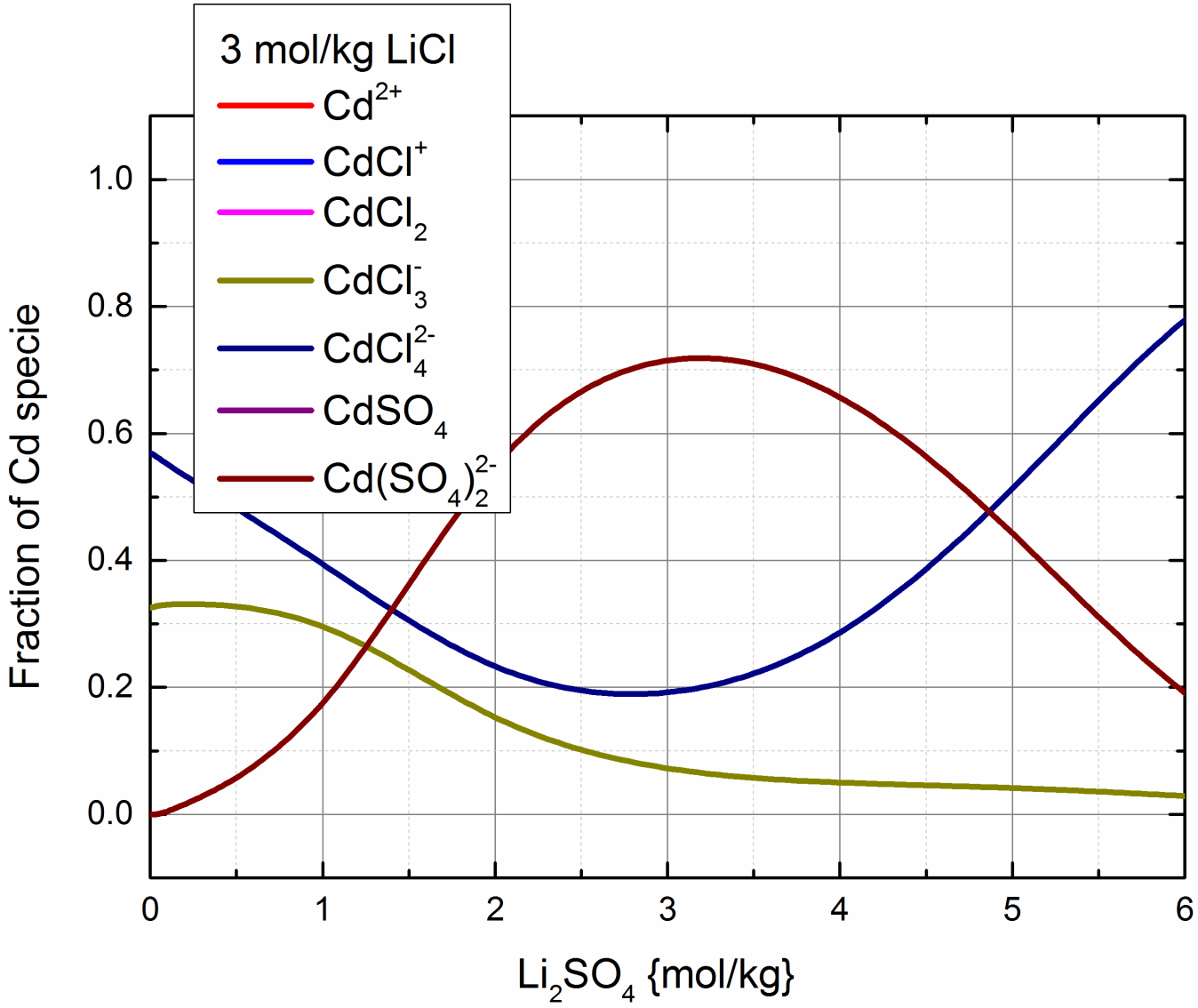

Summary

Chemical activity will affect the constituents of your solution

If we stretch the models we can receive some surprises

Not necessarily the ligand with the highest concentration is the most important

Thanks too

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