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Screen the best ionic liquid for keratin dissolution by using COSMO-RS

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Most PDMS used in tissue engineering applications are nonpolar, inert and highly hydrophobic, which lead to the low biocompatibility and interaction responses between implantations and cells.

Keratin molecules have many inter- and intra-molecular strong bonds and also have no regular repeating units, which lead to it difficult to be dissolved by traditional solvent.

Keratin has the special amino acid sequence for cell adhesion, which can increase susceptibility to bio-decomposition.

Keratin can improve the mechanical properties of composites.
It is nevertheless a challenge to identify the best ILs for keratin dissolution;
Experimental measurement of all these systems is not practically feasible;
A rapid and a priori screening method to predict the keratin solubility capacity for ILs is needed
Screen the best ionic liquid for keratin dissolution by using COSMO-RS

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1. Application of keratin in elastomer materials

2. Structures of lls and keratin models in this study

3. Prediction results

4. Conclusions and Advances

Acknowledgments and References

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