

## Interfacial water layers in biolubrication

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Interfacial water layers attract increasingly attention in both biomedical engineering and material sciences. An actual Google search yields for 'interfacial water' a total of 20000 hits, PubMed 259. They exist in air and under water, with structures imposed by the polarity of the surfaces involved. Their importance consists in controlling a multitude of nanoscale processes, in particular related to lubrication and contact adhesion. Both processes are regulated by polarity contrasts. Access to a better understanding of these vital functions, for instance, the interaction of proteins with their immediate environment in a predominantly aqueous environment, emerges from new laboratory experiments shedding light on two static properties of interfacial water layers (order and surface stability) and two dynamic properties (speed of propagation and range). These intrinsic properties and their interplay have maximum relevance in biology.

### References

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