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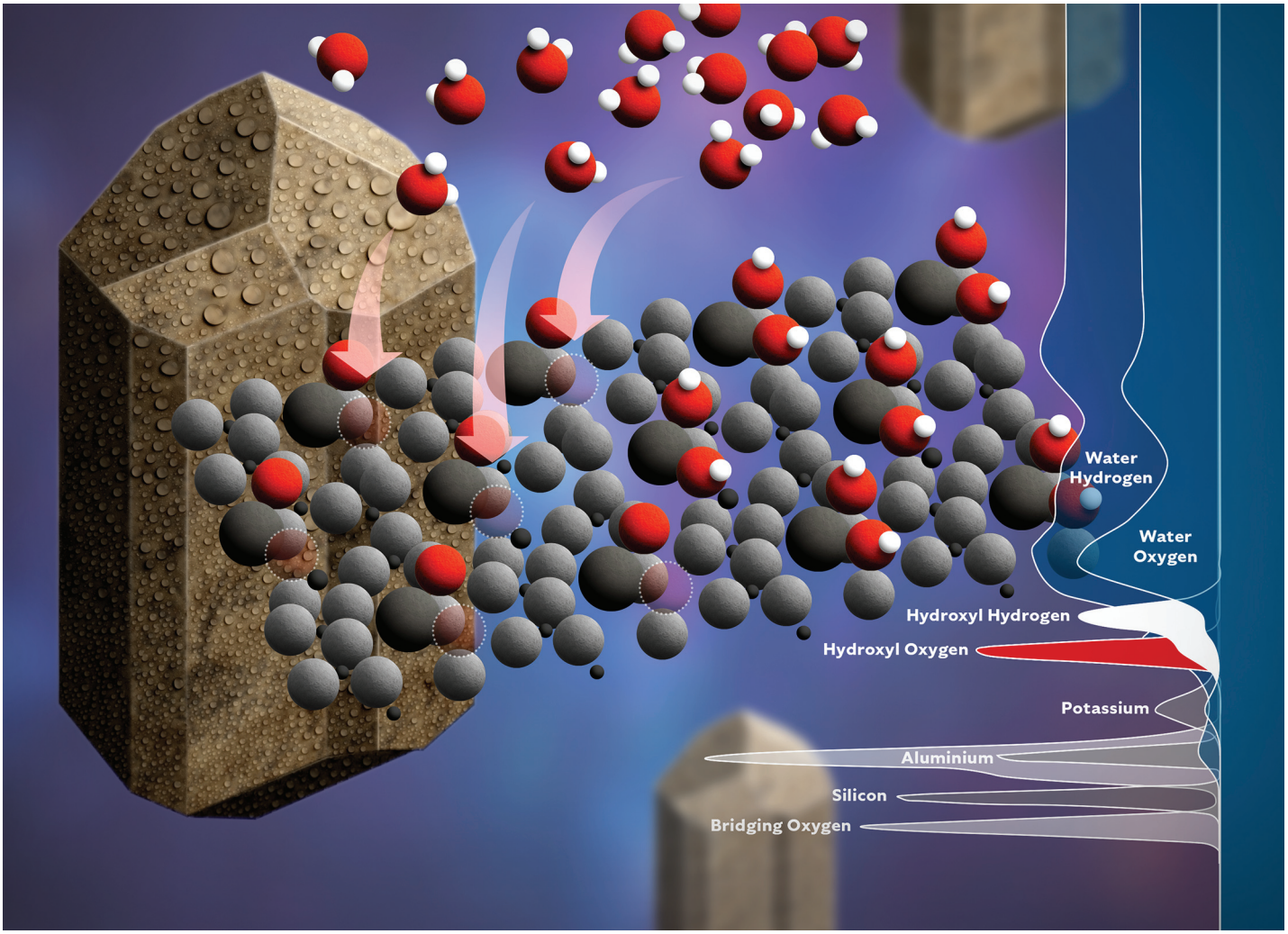
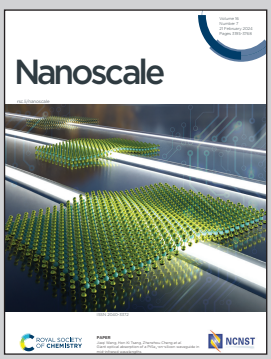


Showcasing research from the group of Professor Angelika Kühnle, Physical Chemistry, Bielefeld University, Germany.

Atomic structure and water arrangement on K-feldspar microcline (001)

This work combines atomic force microscopy under ultrahigh vacuum conditions and at the solid–liquid interface with density functional theory calculations and molecular dynamic simulations to reveal the atomic structure and the water arrangement on the (001) surface of K-feldspar microcline. The authors show that the α-terminated surface is immediately hydroxylated by dissociatively adsorbed water molecules even under ultrahigh vacuum conditions. The microcline (001)-water interface shows three hydration layers normal to the surface under ambient conditions and a well-defined, but complex lateral structure. This publication provides insights into the microcline (001) surface and forms the basis for understanding reactions at feldspar surfaces.

As featured in:



See Tobias Dickbreder, Franziska Sabath *et al.*, *Nanoscale*, 2024, **16**, 3462.

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