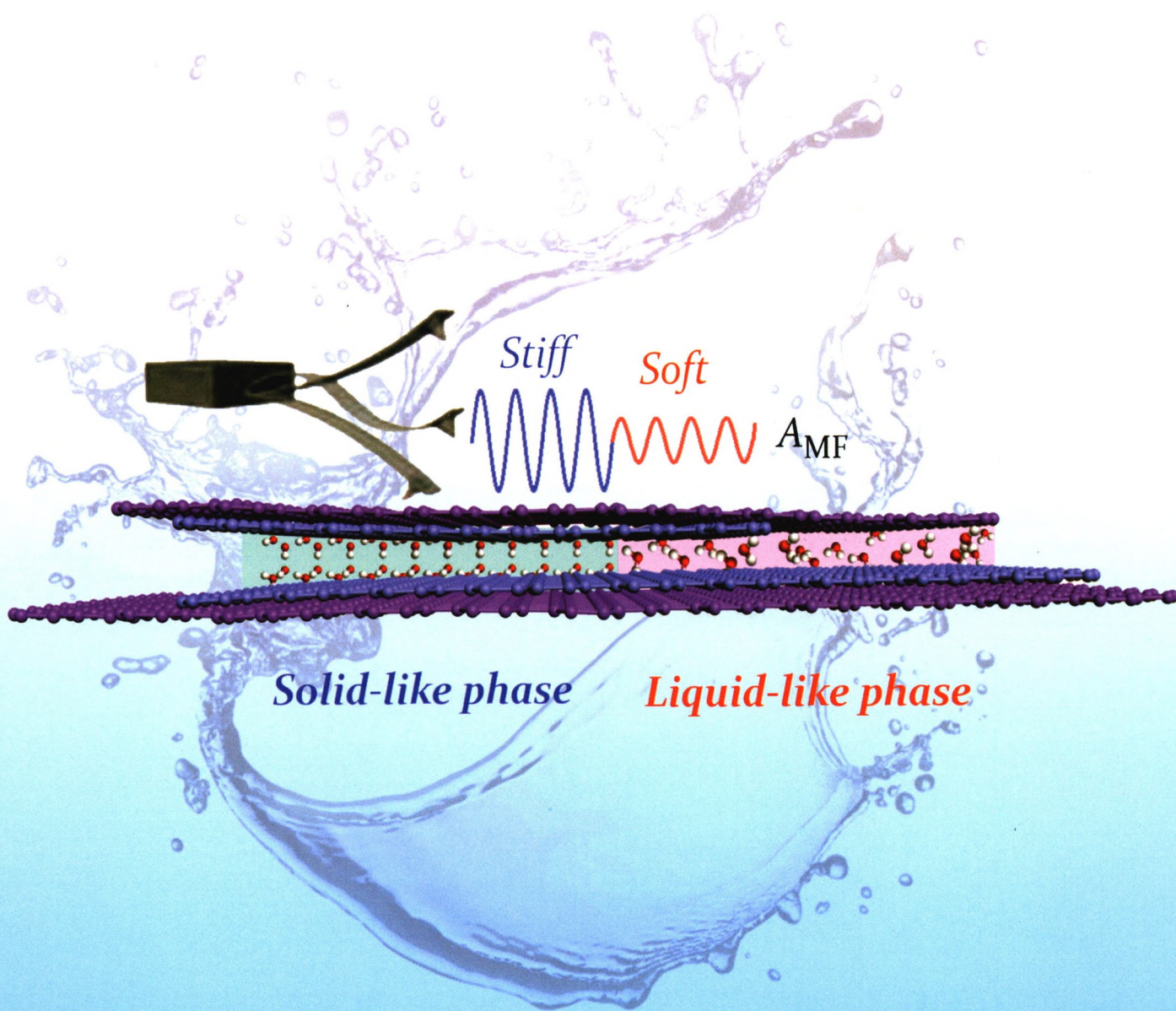


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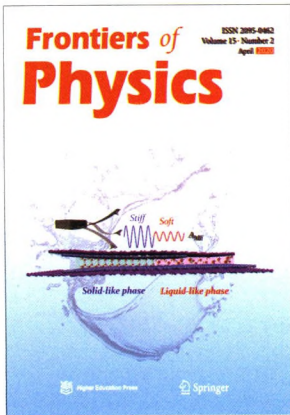
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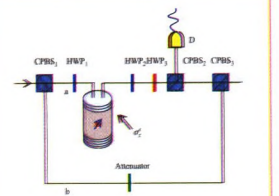
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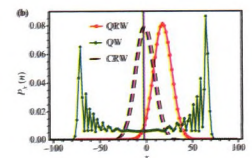
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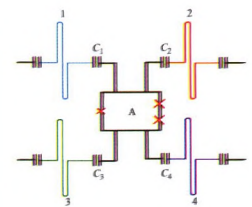
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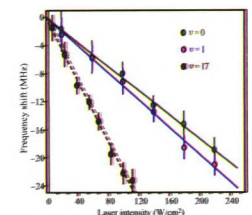
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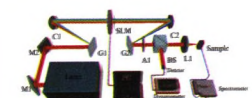
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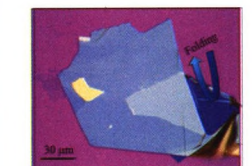
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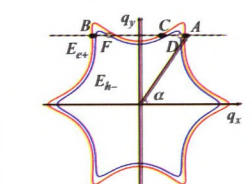
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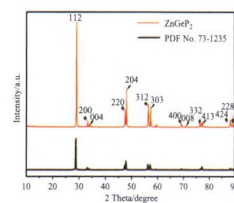
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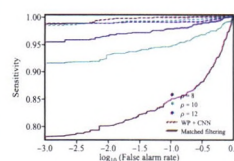
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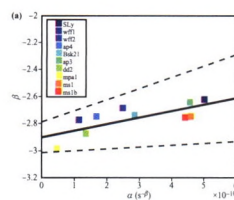
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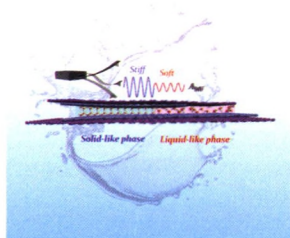
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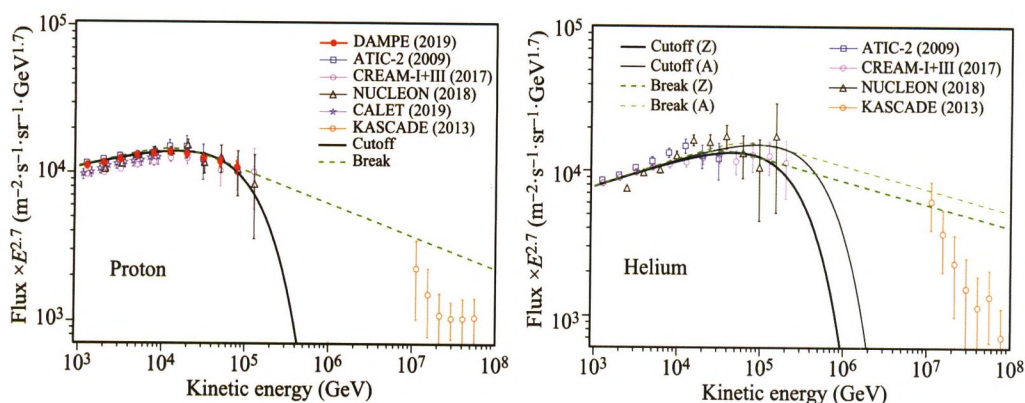


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The phase behavior of water is a topic of perpetual interest due to its remarkable anomalous properties and importance to biology, material science, geoscience, nanoscience, etc. It is predicted confined water at interface can exist in large amounts of crystalline or amorphous states. The confined water layers at a hydrophobic/hydrophobic interface were investigated by advanced atomic force microscopy (AFM). The intercalated water molecules present themselves as two phases, low-density liquid (LDL, solid-like) and high-density liquid (HDL, liquid-like), according to their specific mechanical properties detected with two multifrequency-atomic force microscopy (MF-AFM) modes. For more details, please refer to the article entitled “Real-space visualization of intercalated water phases at the hydrophobic graphene interface with atomic force microscopy” by Zhi-Yue Zheng, *et al.*, *Front. Phys.* 15(2), 23601(2020). [Photo credits: Rui Xu at Renmin University of China.]

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Energy spectra of protons (left) and Helium (right). See: Chuan Yue, et al., Implications on the origin of cosmic rays in light of 10 TV spectral softenings, *Front. Phys.* 15(2), 24601 (2020).

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