

The Structure and Properties of Water, by D. Eisenberg and W. Kauzmann, Oxford University Press, Oxford, 2005, pp. xii + 296. First published in 1969, re-issued in Oxford Classics Series. Scope: monograph. Level: undergraduate and postgraduate.

We are composed mostly of water. Life as we know it depends on liquid water, and most of the Earth's surface is covered with it. Water, or the lack of it, is centrally involved in many human activities and disasters including floods, droughts and wars. So the properties of water are of crucial importance for us all. In the civilised world, most people expect hot and cold running water at the turn of a tap, and they are well familiar with water's phase transitions to ice in their freezers and steam in their kettles. Yet few of them stop to wonder why the specific and latent heats of water are so big, or why ice floats. So this re-issue of the classic text by Eisenberg and Kauzmann is greatly to be welcomed. The authors have pulled together salient information about water from a multiplicity of sources and made it into a coherent whole, concentrating on how its physical properties are related to its structure. There are chapters on the water molecule, its vapour, ice, liquid water, and models of water. Interatomic and intermolecular forces, structure, and thermal and spectral properties are all treated in considerable detail.

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