THEORETICAL MODELS OF PROTON TRANSFER IN CONDENSED MEDIA.

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A short overview of main physical models for the elementary acts of proton transfer in condensed media is presented. The physical mechanisms of the transitions are discussed and major results for the rate constants are given. Especial attention is paid to the proton transfer in the systems with hydrogen bonds one of the most important of which is represented by water. An approach for the elucidation of the mechanism of proton transfer in the surface layers of narrow pores of the membranes of the fuel cells is suggested.

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