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A Synchrotron Radiation Study of the Structure of Cs_2SO_4 Solutions

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Abstract;The hydration structure of Cs_2SO_4 solutions has been investigated by synchrotron radiation with the Beijing Synchrotron Radiation Facility (BSRF) at 298 K. Calculations of the structural model shows that the dominant species in the solutions are hexaaquo-cesium and octaaquo-sulfate ions and the hydration structure of the aqueous solutions of cesium sulfate has been revealed. Effects of concentration on the hydration structure of the ions are also discussed. In addition, no ion pairs have been found in such solutions.

Key words;Solution structure; Supersaturated solution; Cs_2SO_4 ; Synchrotron radiation

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