Structure of liquid water: is the two-state model operative?.

Autorzy

Jacek Gliński

Andrzej Burakowski

Rok wydania

2011

Czasopismo

Chemical Physics Letters

Numer woluminu

508

Strony

210-214

DOI

10.1016/j.cplett.2011.04.051

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Untypical changes of molar volume and compressibility of liquid water with temperature are analyzed using a very simple model assuming that a temperature-dependent equilibrium exists between two states of water molecules in liquid. The fittings show, independent on extremely rough assumptions and simplifications applied, that the two-state model of liquid water is still able to reproduce the molar volumes almost perfectly but in the case of compressibility physically nonrealistic results are obtained. These results generate questions and reservations about opportunity of determining the number of states describing liquid water.

Adres publiczny

https://doi.org/10.1016/j.cplett.2011.04.051

Strona internetowa wydawcy

http://www.elsevier.com