CONTROL OF WATER CLUSTER GROWTH BY Ne INSERTION IN He NANODROPLETS

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We have shown that the growth of the $(H_2O)_n$ clusters in He nanodroplets proceeds via the sequential addition of water molecules to the preformed $(H_2O)_{n-1}$ rings, follwed by ring insertion. However, if we add a small number of Ne atoms to the He nanodroplet before commencing the water cluster growth process, a polar water complex is formed, presumably because the Ne stifles this ring insertion mechanism. The spectroscopy and corresponding *ab initio* calculations of this polar complex will be discussed.