

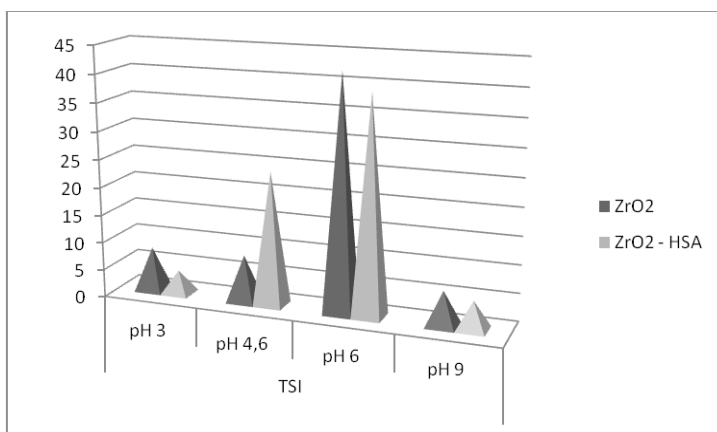
# Physico-chemical nanomaterials science

## Stability mechanism of the zirconia suspension in the human serum albumin presence

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The issue of the mineral oxide suspension stability in the protein presence is rarely discussed in the literature. For this reason, this study investigated the stabilization/destabilization mechanism of the zirconium(IV) nanooxide suspension in the presence of human serum albumin (HSA) as a function of the solution pH value. Stability measurements were performed using a turbidimeter. The obtained results, ie. the stability index (TSI) values, are shown in the following diagram.



The higher TSI value, the lower system stability. Thus, in the human serum albumin presence an increase in the suspension stability was observed at pH 3, 6 and 9. In turn, at pH 4.6 and the stability reduction was noticed.