A New PH Sensor with Ionic Conductive Ceramic Material

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The lithium lanthanum titanate Li3x La2/3-x TiO3 with x comprising beetween 0.1 and 0.17 exhibit a high lithium conductivity. His use in lithium selective electrode is not possible in reason of a strong interference of protons or hydroxyle ions. Thus, the response of a sensor using this material (with x=0.1) in function of the variation of the pH in aqueous solutions is linear but subNernstian. The response of this type of sensor is showed in comparison of a pH glass electrode in various mediums. This type of sensor can be used in industrial applications as the Cleaning in Place in milk industry.