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Interphase transformations at system GaN–H_2O (pH)

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Abstract

The possible thermodynamic transformations (potential determinative reactions), proceeding in system GaN–H_2O (pH) at room temperature are considered. Sizes of their seeming equilibrium potentials E_D^K are calculated, and the diagram E_D^K – pH is constructed. The possible mechanism of formation and surface composition in connection with values of electrode potential and pH of the liquid environment is discussed. This data is necessary for understanding of the dissolution (destruction) mechanism of the semiconductor in connection with conditions of its processing and choice of them for purposeful formation of a surface in liquid chemical and electrochemical etching conditions.