



Fig.1. Vicinal quantum wire on the low-index surface; 1 - atoms in the crystal lattice; 2 - region of the particle wave function localization along the surface; \mathbf{a} and \mathbf{b} - basic translation vectors along the low-index surface; A - new basic translation period along the quantum wire; α - orientation angle which determines the period A in the vicinal quantum wire; $|\Psi|^2$ - distribution of electron density on the first quantum level along the surface in the wire; (X, Y, Z) - low-index coordinate system, (X', Y', Z') - high-index coordinate system, $Z = Z'$.