

Polarization-sensitive photo-synapses based on anisotropic β -Ga₂O₃ for dynamic visual perception

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Supporting Information

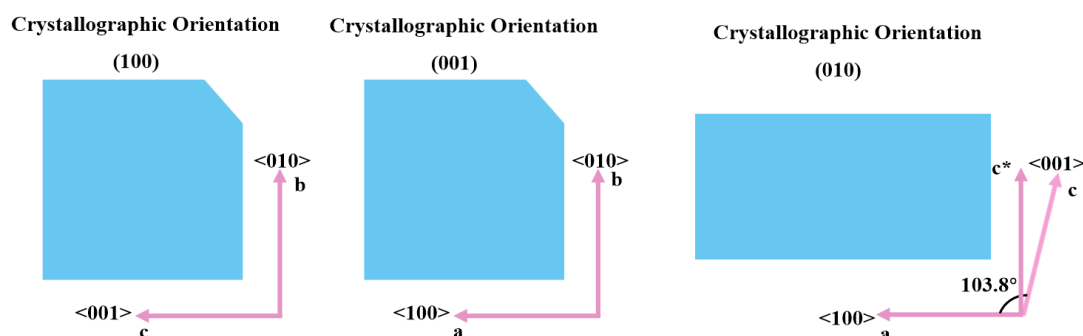


Figure S1 Crystallographic orientation of the β -Ga₂O₃ crystal. For the (100) plane, 0° polarization corresponds to the electric field vector (E) parallel to the b-axis ($E \parallel b$), and 90° corresponds to $E \parallel c$; for the (001) plane, 0° is $E \parallel b$ and 90° is $E \parallel a$; for the (010) plane, 0° is $E \parallel c^*$ and 90° is $E \parallel a$.

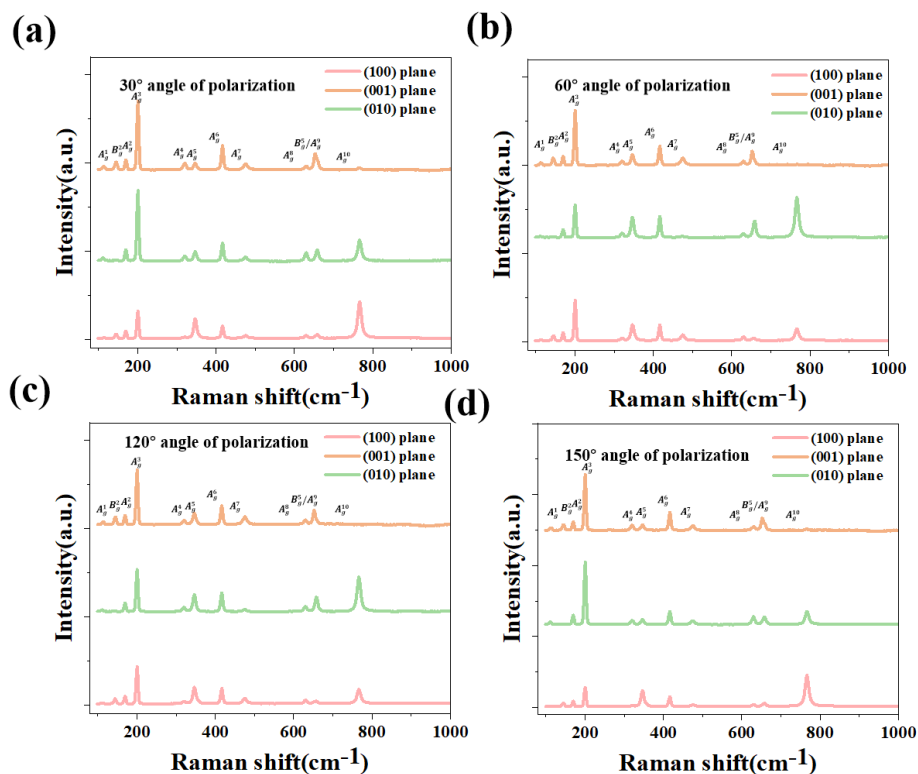


Figure S2 ARPR spectra of all the β -Ga₂O₃ samples collected from the (100), (010), and (001) planes over polarization angles spanning 0°-180°.

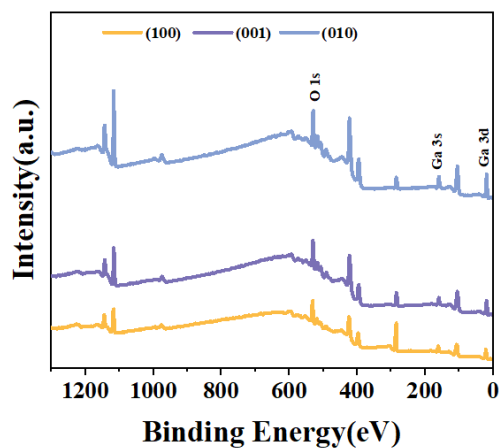


Figure S3 The X-ray photoelectron spectroscopy (XPS) survey spectrum of all the β -Ga₂O₃ samples.

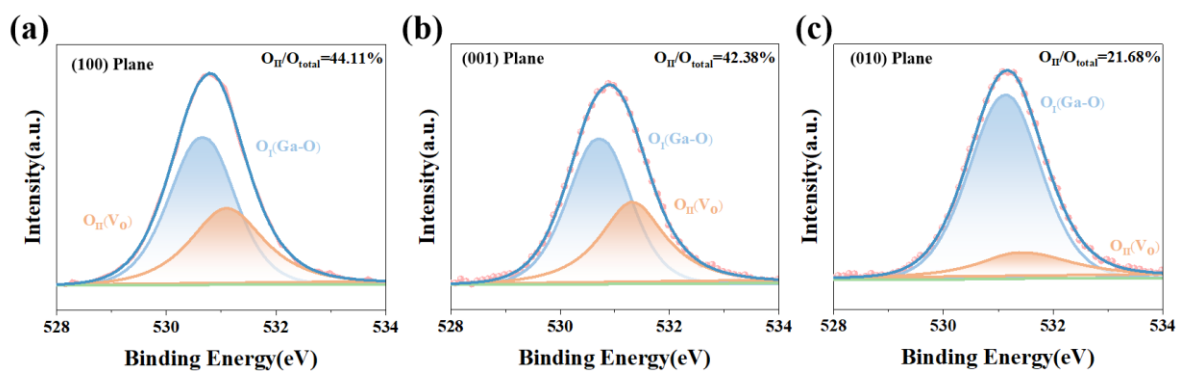


Figure S4 XPS O 1s spectra of β -Ga₂O₃ single crystals with (100), (010), and (001) orientations.

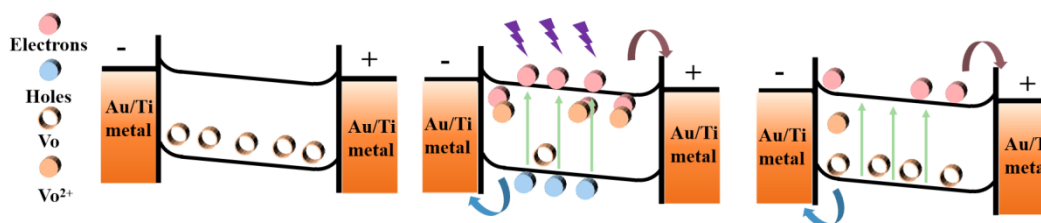


Figure S5 Schematic illustration of the PPC effect.

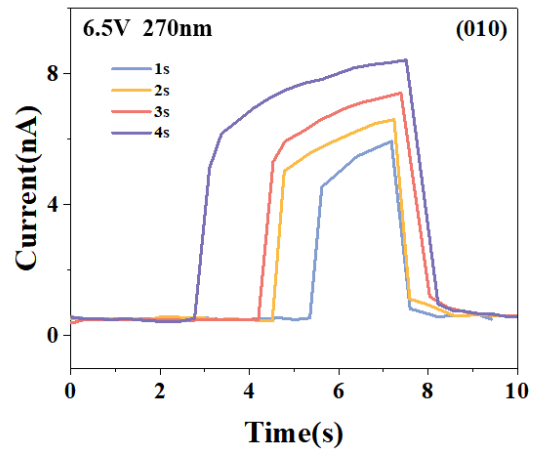


Figure S6 EPSC of (100)-oriented β -Ga₂O₃ based device.