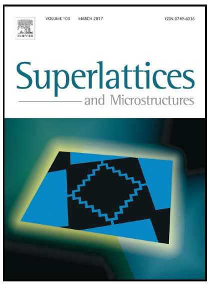

Hot electron assisted vertical leakage/breakdown in AlGaN/GaN heterostructures on Si substrates

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Highlights

1. An interesting phenomenon is investigated that high energetic hot electrons can assist vertical leakage and even accelerate vertical breakdown.

2. A model is proposed that high energetic electrons can detrap or ionize defect states.

3. The trap states which are responsible for the phenomenon are identified.