

Supplementary Information

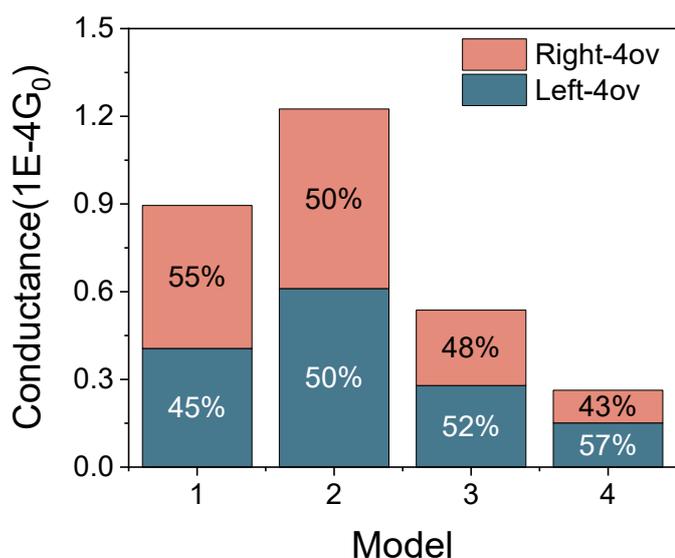


Fig. S1 Comparison of conductance for the same model with four OV's placed on either side of the barrier. Red represents conductance with vacancies on the right side, blue represents conductance with vacancies on the left side, and the percentage shows the conductance difference between the two models, with 50% indicating the closest conductance.

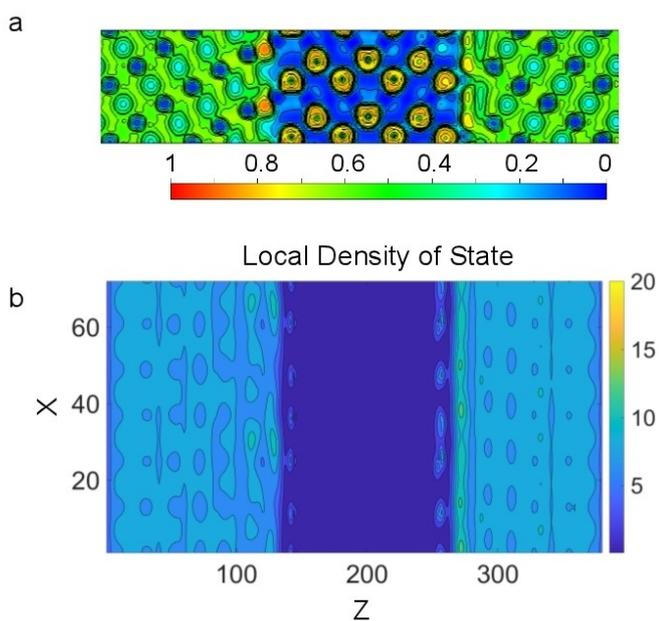


Fig. S2: (a) Electron Localization Function (ELF) of the defect-free model, (b) Local Density of States (LDOS) of the defect-free model.

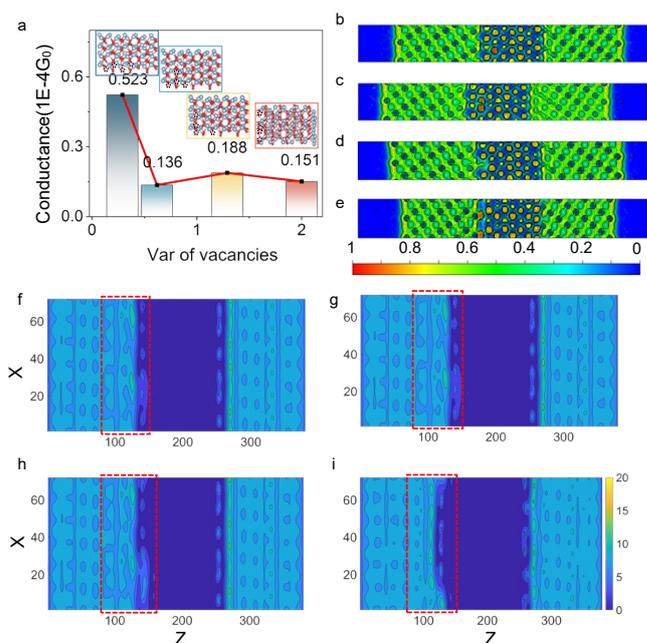


Fig. S3 (a) Zero-bias conductance and corresponding atomic structure comparison of models with four OV's; (b)-(e) ELF for these four models corresponding to (a); (f)-(i) LDOS for these four models corresponding to (a).

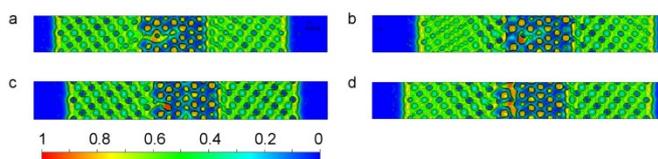


Fig. S4 ELF for these four models corresponding to Fig. 5a.

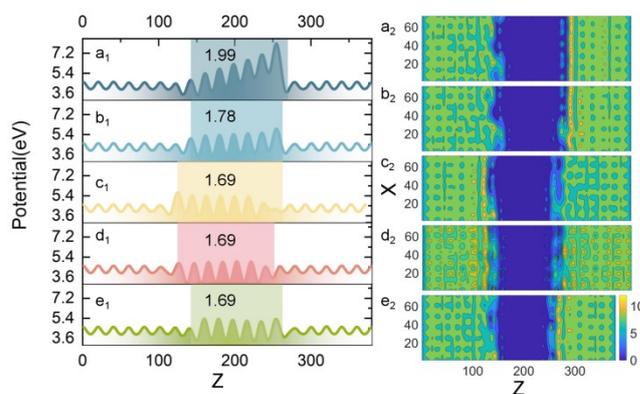


Fig. S5 (a₁ -e₁) the electrostatic potential for the five defective models corresponding to Figure 6, with the average potential of the shaded areas being 1.99, 1.78, 1.69, 1.69, and 1.69, respectively. (a₂ -e₂) LDOS for these five models.