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Non-Equilibrium Second Order Phase Transition in a Cooper-Pair Insulator

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Abstract:

I-V characteristics, measured in the insulating phase of amorphous indium oxide (a:InO), show a qualitative resemblance to the classical Van der Waals (VdW) P-V diagram of the liquid-gas phase transition. We present a mapping between these two systems. This mapping helps us identify a potential critical point, where a second-order phase transition occurs.