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**Boundary Green's function of topological phases** YIMU BAO,  
School of Physics, Peking University, Beijing, 100871, China, YANG PENG, FE-  
LIX VON OPPEN, Dahlem Center for Complex Quantum Systems and Fachbereich  
Physik, Freie Universitat Berlin, 14195 Berlin, Germany — We study the properties  
of the boundary Greens function of topological electronic systems by a recursive ap-  
proach. The recursion flows to the boundary Greens function of the infinite system  
and can be implemented analytically in simple cases. We show how the recursion  
yields the topologically protected edge mode and describes the phase diagram as  
well as the topological phase transition. We explore the uniqueness of the resulting  
boundary Green functions.

Yimu Bao  
School of Physics, Peking University, Beijing, 100871, China

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