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Optimal limiting absorption principle for a Schrödinger type operator on a Lipschitz cylinder. (English)

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Summary: Spectral properties of a Schrödinger type operator on a cylinder is established by a version of Mourre's conjugate operator method. In particular, the limiting absorption principle is proved in an optimal scale of Besov spaces.

Keywords : Dirichlet Laplacian; Lipschitz domain; short-range potential; Besov spaces; Hamiltonians; essential spectrum
Classification :
∗35Q40 PDE from quantum mechanics
35P25 Scattering theory (PDE)
47F05 Partial differential operators
81U05 2-body potential scattering theory
47N20 Appl. of operator theory to differential and integral equations
35J10 Schroedinger operator