

Degasperis, A.; Shabat, A.

Construction of reflectionless potentials with infinite discrete spectrum. (English)

Zbl 0857.34073

Theor. Math. Phys. 100, No. 2, 970-984 (1994) and Teor. Mat. Fiz. 100, No. 2, 230-247 (1994).

Summary: We investigate the one-dimensional Schrödinger operator. The condition that the potential be self-similar under Darboux transformations leads to transparent potentials with infinitely many eigenvalues.

MSC:

34L40 Particular ordinary differential operators (Dirac, one-dimensional Schrödinger, etc.)

Cited in **10** Documents

81Q10 Selfadjoint operator theory in quantum theory, including spectral analysis

81U30 Dispersion theory, dispersion relations arising in quantum theory

Keywords:

one-dimensional Schrödinger operator; Darboux transformation; infinitely many eigenvalues

Full Text: [DOI](#)

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