

## SHARP $L^p$ - $L^q$ ESTIMATE FOR THE SPECTRAL PROJECTION ASSOCIATED WITH THE TWISTED LAPLACIAN

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**Abstract:** In this note we are concerned with estimates for the spectral projection operator  $\mathcal{P}_\mu$  associated with the twisted Laplacian  $L$ . We completely characterize the optimal bounds on the operator norm of  $\mathcal{P}_\mu$  from  $L^p$  to  $L^q$  when  $1 \leq p \leq 2 \leq q \leq \infty$ . As an application, we obtain a uniform resolvent estimate for  $L$ .

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**Key words:** twisted Laplacian, spectral projection.