On tricyclic graphs with minimal energy

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Abstract. The energy of a graph is defined as the sum of the absolute values of all the eigenvalues of the graph. Let \( \mathcal{G}_n \) be the class of tricyclic graphs \( G \) on \( n \) vertices and containing no disjoint odd cycles \( C_p, C_q \) of lengths \( p \) and \( q \) with \( p+q \equiv 2 \) (mod 4). In this paper, we obtain the minimal and second-minimal values on the energies of the graphs in \( \mathcal{G}_n \) and determine the corresponding graphs.