There is a constant $c$ such that for every $n \in \mathbb{N}$, there is an $N_n$ such that for every $N \geq N_n$ there is a polytope $P$ in $\mathbb{R}^n$ with $N$ vertices such that

$$\text{vol}_{n-1}(\partial(B_2^n \Delta P)) \leq c \frac{\text{vol}_{n-1}(\partial B_2^n)}{N^{\frac{2}{n-1}}}$$

where for two convex bodies $K$ and $L$, $\text{vol}_{n-1}(\partial(K \Delta L))$ is the surface area of the symmetric difference of $K$ and $L$. (Received August 28, 2014)