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Mahler measures in products of algebraic numbers

Let $M(\alpha)$ denote the Mahler measure of the algebraic number α and assume $\alpha_1, \dots, \alpha_N \in \bar{\mathbb{Q}}$ are such that $\alpha = \alpha_1 \cdots \alpha_N$. It seems a generally difficult problem to give non-trivial information about $M(\alpha_n)$ in terms of α , although the t -metric Mahler measure $M_t(\alpha)$, first studied by Dubickas and Smyth in 2000, is a convenient object to consider in this context. In joint work with J. Jankauskas, we resolve an earlier conjecture regarding $M_t(\alpha)$ in the case where $\alpha \in \mathbb{Q}$. This result suggests a generalization to other $\alpha \in \bar{\mathbb{Q}}$ which turns out, however, to be false. We give an infinitely collection of counterexamples of degree 2 and discuss possible modifications to the conjecture.