

Abstract

In this paper, all of the conjectures in [Nuh Aydin, Peihan Liu, Bryan Yoshino: Polycyclic Codes Associated with Trinomials: Good Codes and Open Questions, Designs, Codes and Cryptography, 90(5): 1241-1269 (2022).] are settled: some proven correct, some proven correct with a modification, and some disproven, involving the equivalence and duality of polycyclic codes associated with trinomials. We also give methods to construct isodual and self-dual polycyclic codes, and study the self-orthogonal and dual-containing polycyclic codes over binary field.