

Domination and packing complexity of honeycomb networks

Zehui Shao, Shaohui Wang*, Louisiana Christian University

Dominating theory provides an advanced model to encrypt binary string into a DNA sequence, whose complexity can be measured as domination number. A set $D \subseteq V(G)$ is a dominating set of a graph G if every vertex in $V(G) - D$ is adjacent to some vertices of D . The domination number is the minimal cardinality of a dominating set of G . A vertex set S of G is a packing if the closed neighbourhoods of S are pairwise disjoint in G . In this paper, we explore the structural complexity of honeycomb networks, and determine exact domination numbers for these networks.

Keywords: Domination number, honeycomb networks, packing, complexity, molecular graphs.