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Armstrong Hall, P.O. Box 6310, Morgantown, WV 26505. *r-hued Coloring K_4 -minor Free Graphs.*

For positive integers k and r , a (k, r) -coloring of a graph G is a proper k -coloring of the vertices such that every vertex of degree d is adjacent to vertices with at least $\min\{d, r\}$ different colors. The *r-hued chromatic number*, denoted by $\chi_r(G)$, is the smallest integer k for which a graph G has a (k, r) -coloring. For $r = 2$, χ_2 is known as the dynamic chromatic number. Let G be a K_4 -minor free graph. We proved that $\chi_r(G)$ is at most (i) $r + 3$ if $2 \leq r \leq 3$; or (ii) $\lfloor 3r/2 \rfloor + 1$ if $r \geq 4$. Examples are given to show the bounds can be attained. (Received September 25, 2012)