Katchalski, Meir; **McCuaig, William**; **Seager, Suzanne**
Ordered colourings. (English) Zbl 0842.05032
Discrete Math. 142, No. 1-3, 141-154 (1995).

An ordered k-coloring of a graph G is a coloring function $c : V(G) \to \{1, 2, \ldots, k\}$ such that, for every pair of distinct vertices x and y and for every x-y path P, if $c(x) = c(y)$, then there exists an internal vertex z of P such that $c(x) < c(z)$. This paper proves some results about ordered colorings of trees and planar graphs. For example, if every planar graph has an ordered coloring using at least $g(v)$ vertices, then $g(v) \leq 3(\sqrt{6} + 2)\sqrt{v}$. The paper also examines the relationship between connectivity and ordered colorings.

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MSC:

05C15	Coloring of graphs and hypergraphs
05C05	Trees
05C10	Planar graphs; geometric and topological aspects of graph theory
05C35	Extremal problems in graph theory
05C40	Connectivity

Cited in **2** Reviews
Cited in **36** Documents

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