Title: Criterions of supersolubility for products of supersoluble groups

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Let H and T be subgroups of a group G. Then we call H conditionally permutable (or in brevity, c-permutable) with T in G if there exists an element $x \in G$ such that $HT^x = T^x H$. If H is c-permutable with T in $\langle H, T \rangle$, then we call H completely c-permutable with T in G. By using the above concepts, we will give some new criterions for the supersolubility of a finite group $G = AB$, where A and B are both supersoluble groups. In particular, we prove that a finite group G is supersoluble if and only if $G = AB$, where both A, B are nilpotent subgroups of the group G and B is completely c-permutable in G with every term in some chief series of A. We will also give some applications of our new criterions.

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