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An Efficient Synthesis of Neoflavonoid Antioxidants Based on Montmorillonite K-10 Catalysis

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Abstract

A new approach to synthesis of neoflavonoids, based on a high yielding Montmorillonite K-10 catalyzed lactone ring forming cyclization process, is described. The utility of this methodology is exemplified by its employment in the preparation of the substituted 4-phenylneoflavonoids 1-8. The free radical scavenging properties of these substances were evaluated. The neoflavonoids 1 and 5, which mimic esculetin-type antioxidants, were observed to quench hydrazyl free radicals.

Key words：Montmorillonite K-10; 4-phenylneoflavonoids; Fries rearrangement