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The activity of metal ions impregnated on natural phosphates from Burkina Faso for the synthesis of chalcone in a green solvent.

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The Claisen-Schmidt condensation is one of the most important catalytic reactions for syntheses developed in the 20th century. Generally, this condensation is carried out with or without a toxic solvent in the presence of a catalyst. This research focused on the use of a green solvent (water) for the Claisen-Schmidt condensation reaction, improved by catalysts based on simple natural phosphate (PNc), natural phosphate impregnated with potassium (K- PN) or zinc (Zn-PN). The study highlighted the significant improvement in the catalytic activity of these catalysts in water. The optimal reaction conditions were also determined, taking into account factors such as quantity, reaction kinetics, solvent volume, reuse and the effect of the metal ions used. Additionally, the stability of these catalysts has been demonstrated across numerous reaction cycles, highlighting their reuse potential. The results showed that the catalysts developed are effective for the Claisen-Schmidt condensation reaction, under specific conditions in the presence of a green solvent (water).

Keywords: heterogeneous catalyst, phosphate, environment, green chemistry.

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