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Facile four-component domino reactions for the synthesis of 2,6-diaryl-4-(1*H*-indol-3-yl)-3-cyanopyridines

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Abstract: A series of novel 2,6-diaryl-4-(1*H*-indol-3-yl)-3-cyanopyridines was obtained in good yields from the domino reactions of 3-(1*H*-indol-3-yl)-3-oxopropanenitrile, 4,4,4-trifluoro-1-phenylbutane-1,3-dione and aromatic aldehydes in the presence of ammonium acetate under solvent-free condition. This transformation involves the formation of two C-C and two C-N bonds leading to the creation of a six-membered ring in a one-pot operation.

Keywords: Four-component; 3-aryl-3-oxopropanenitrile, 4,4,4-trifluoro-1-arylbutane-1,3-dione, ammonium acetate; indolylpyridines.

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