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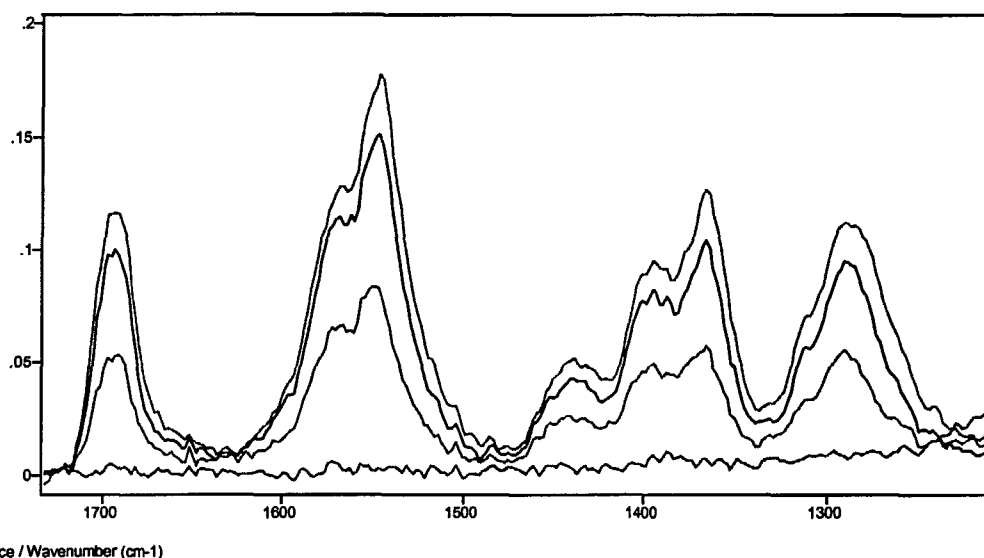
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(54) Title: PHOTOLYTIC CONVERSION PROCESS TO FORM PATTERNED AMORPHOUS FILM



(57) Abstract: The invention is directed to a photoresist-free method for depositing films composed of metals, such as copper or silica, or their oxides from metal complexes. More specifically, the method involves applying an amorphous film of a metal complex to a substrate. The metal complexes have a metal and a photo-degradable ligand. A preferred ligand is acac or alkyl-acac, especially in combination with acetate ligands. These films, upon, for example, thermal, photochemical or electron beam irradiation may be converted to the metal or its oxides. By using either directed light or electron beams, this may lead to a patterned metal or metal oxide film in a single step. Low temperature baking may be used to remove residual organics from the deposited film. If silica is the metal, the deposited film has excellent smoothness and dielectric properties.



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