**Role of fuel/oxidizer on the Cu-Al2O3 Nanocomposite fabricated by the solution combustion synthesis method**

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**Abstract**

In this investigation, copper and aluminum nitrates are used as oxidizer and urea as fuel to produce Cu-Al2O3 nanocomposite using solution combustion synthesis. The fuel/oxidizer (F/O) ratios were selected between 0.9 to 1.75. The products were analyzed using X-ray diffraction, SEM, TEM techniques. The change in temperature during the process was recorded as a fuction of time. The Results showed that increasing the F/O upto the stoichiometric ratio caused an increase in the combustion temperature and a deacrese in combustion temperature observed as F/O ratio incresed from 1 to 1.75. Microscopic evaluations using SEM and TEM proved the production Cu-Al2O3 nanocomposite by this method.

**Keywords**: Fuel, Oxidizer, Urea, Solution Combustion Synthesis, Cu-Al2O3 nanocomposite.