



Lanthanum Strontium Manganite

fuelcellmaterials.com offers standard and custom formulations of lanthanum strontium manganite (LSM) electrode materials. LSM is the most widely used cathode material for solid oxide fuel cells and other electrochemical cells used with YSZ based ceramic electrolytes. Its thermal expansion matches that of yttrium stabilized zirconia, and LSM provides good electrochemical performance at temperatures above 800°C. Specifications on our standard LSM product are provided in Table 1 (below) and representative data are provided in the figures on the reverse. We offer LSM in various quantities of powder. Custom formulations can be delivered typically within three weeks of ordering.

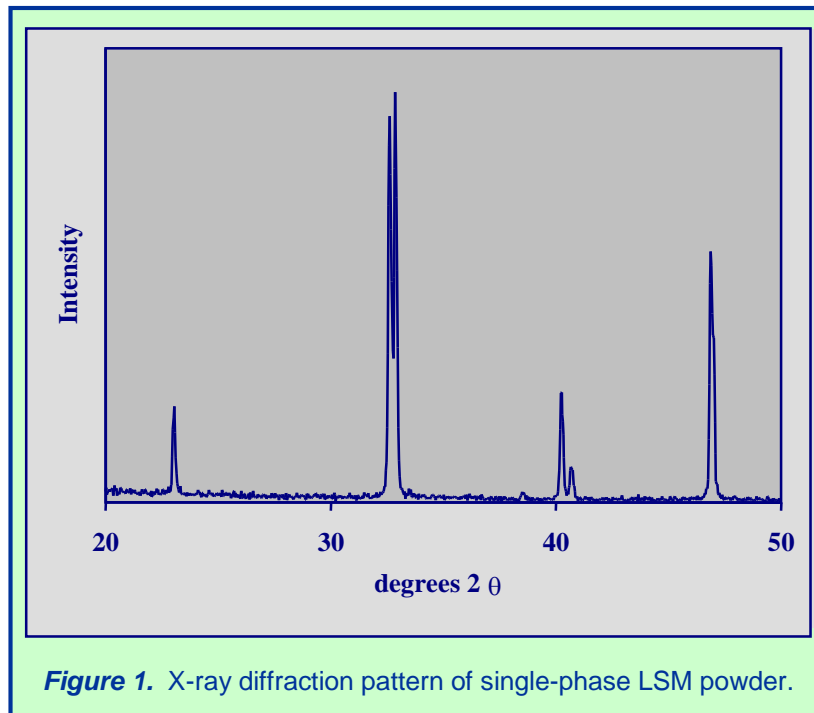
Applications

- Electrode material for zirconia-based (YSZ) ceramic electrolytes.
- Cathode material for solid oxide fuel cells for operating temperatures above 800°C.
- Catalysts and sensors.

Features

- Powder characteristics designed for tape casting and screen printing processes.
- High crystalline-phase and chemical purity.
- Process is scalable to low-cost, high-volume production.

Table 1. Product Specifications	
Composition *	LSM20: $(La_{0.80}Sr_{0.20})_{0.98}MnO_{3-\delta}$
Crystal Structure	Single-Phase Perovskite
Surface Area	4-8 m ² /gram
Particle Size (d50)	0.3-0.5 microns
Electrical Conductivity	$\sigma > 200$ S/cm @ 800°C
Thermal Expansion	α 10-11 ppm/°C
Custom formulations available	



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