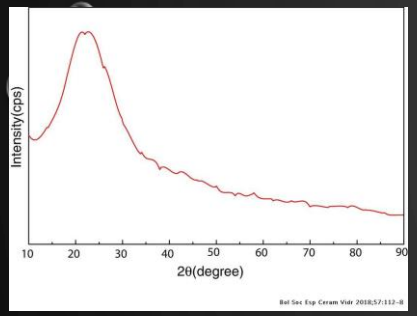
SYNTHESIS OF NANO-CRYSTALLINE FORSTERITE (MG2SIO4) POWDER FROM BIOMASS RICE HUSK SILICA BY SOLID-STATE ROUTE



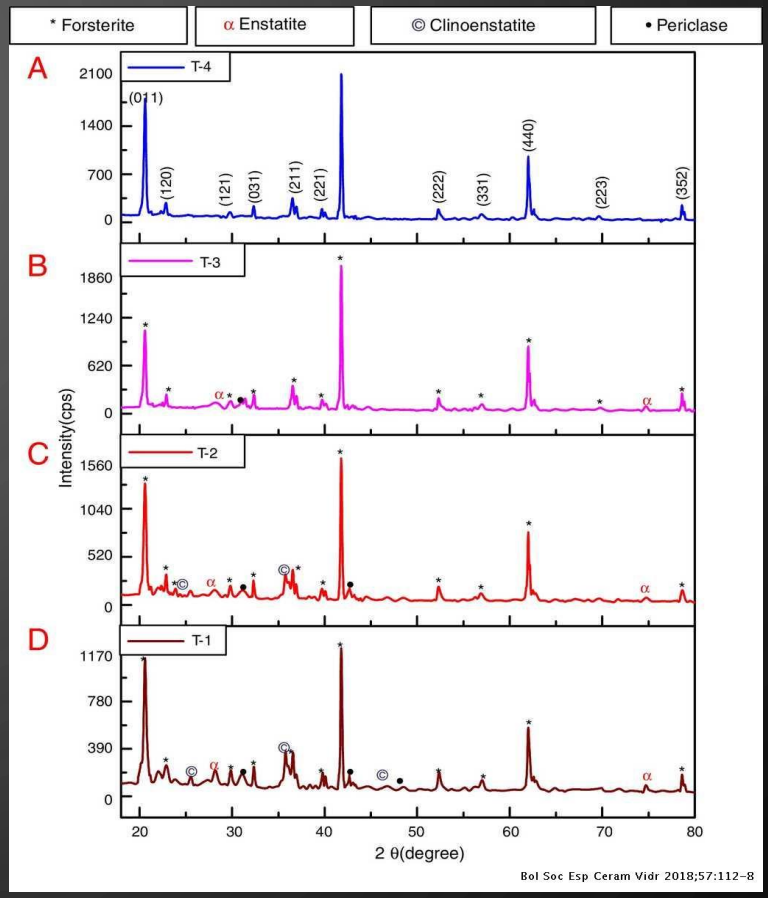
* XRD of heat treated RHA

Compound	Wt.%	Compound	Wt.%
SiO_2	96.01	TiO_2	0.08
Na_2O	1.42	ZnO	0.07
P_2O_5	0.91	CuO	0.06
K_2O	0.52	Rb_2O	0.03
CaO	0.42	BaO	0.02
Fe_2O_3	0.16	ZrO_2	0.02
MgO	0.11	Re_2O_7	0.01
RuO_2	0.10	Y_2O_3	0.01
SO_3	0.09	Eu_2O_3	0.01

* Chemical composition by XRF of heat treated RHA

PROCEDURE

- Growth of MG2SiO4 by calcined biomass rice at 4 different temperatures
- RIGAKU-Miniflexll diffractometer (Serial no: HD20972, Japan) adopted Cu Kα radiation (λ=1.5405 ˚A) with a tube voltage of 40 kV and current of 35 mA in a 2Θ range between 10°-90°.
- In the way the temperature is increased, the peak of each element is higher.



- XRD of the four different samples.

[700°C (T-1), 800°C (T-2), 900°C (T-3), 1000°C (T-4)]

- *"MATHUR, L., HOSSAIN, S. S., MAJHI, M. R., & ROY, P. K. (2018). SYNTHESIS OF NANO-CRYSTALLINE FORSTERITE (MG2SIO4) POWDER FROM BIOMASS RICE HUSK SILICA BY SOLID-STATE ROUTE. BOLETÍN DE LA SOCIEDAD ESPAÑOLA DE CERÁMICA Y VIDRIO, 57(3), 112-118."*