

Preparation, Characterization and Surface Modification of Periodic Mesoporous Silicon- Aluminum-Carbon-Nitrogen Frameworks

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SUPPORTING INFORMATION

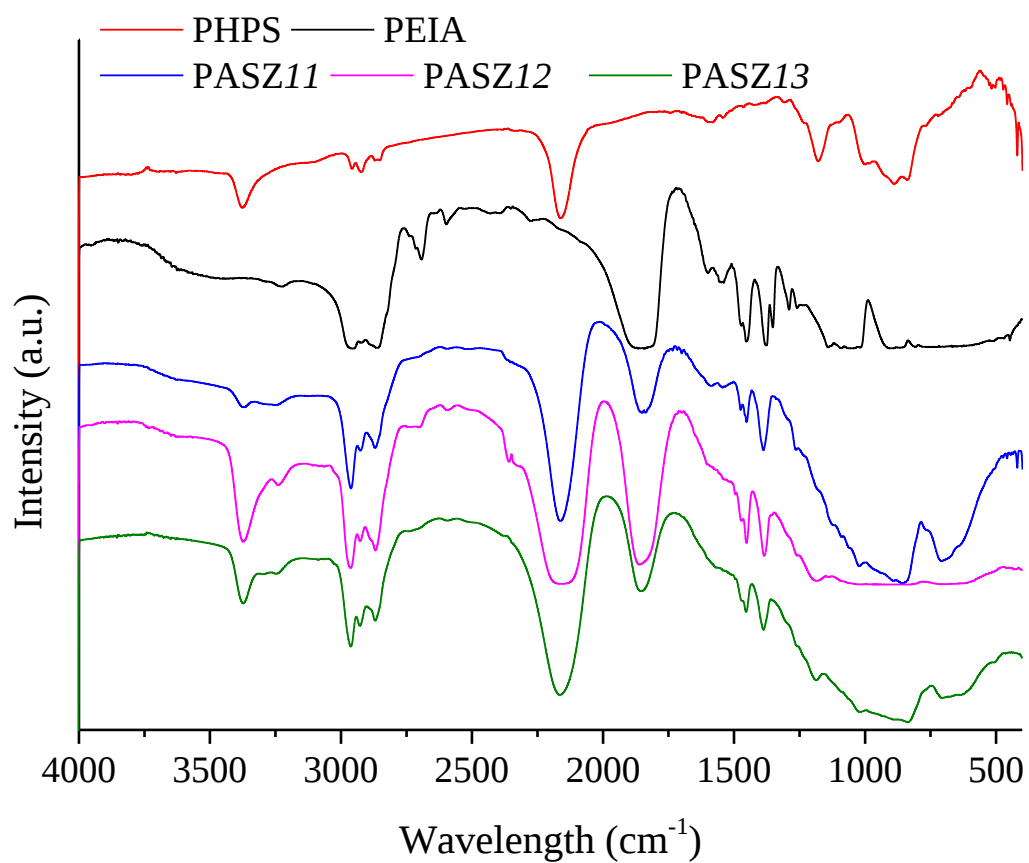


Figure SI1. FTIR spectra of PHPS, PEIA and blended polymers **PASZ_{xy}**.

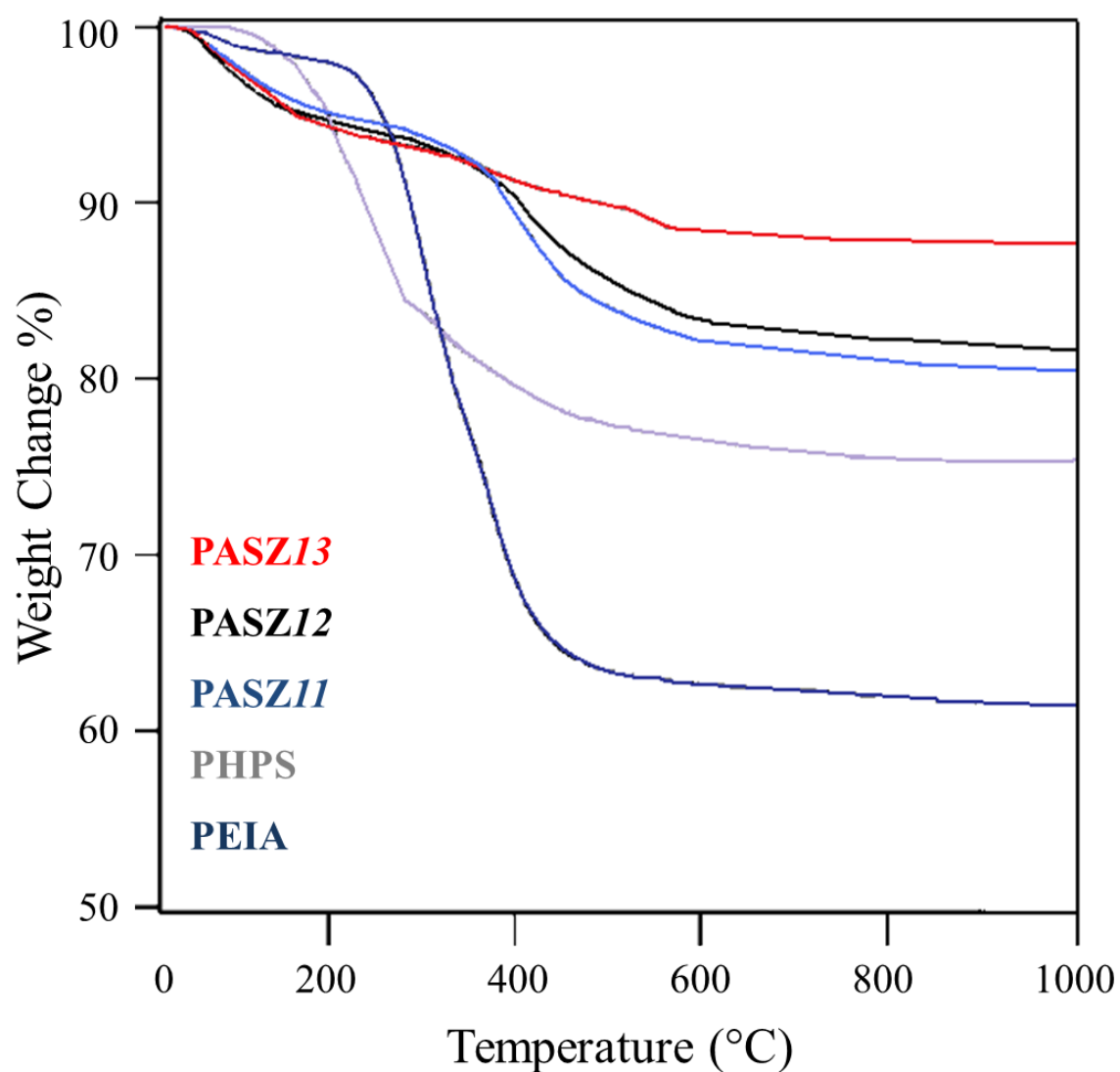


Figure SI2. TG curves recorded during decomposition of PHPS, PEIA and blended polymers **PASZ_{xy}** performed in a nitrogen atmosphere (1000 °C, 5 °C min⁻¹) with a dwelling time of 10 min at 1000 °C.

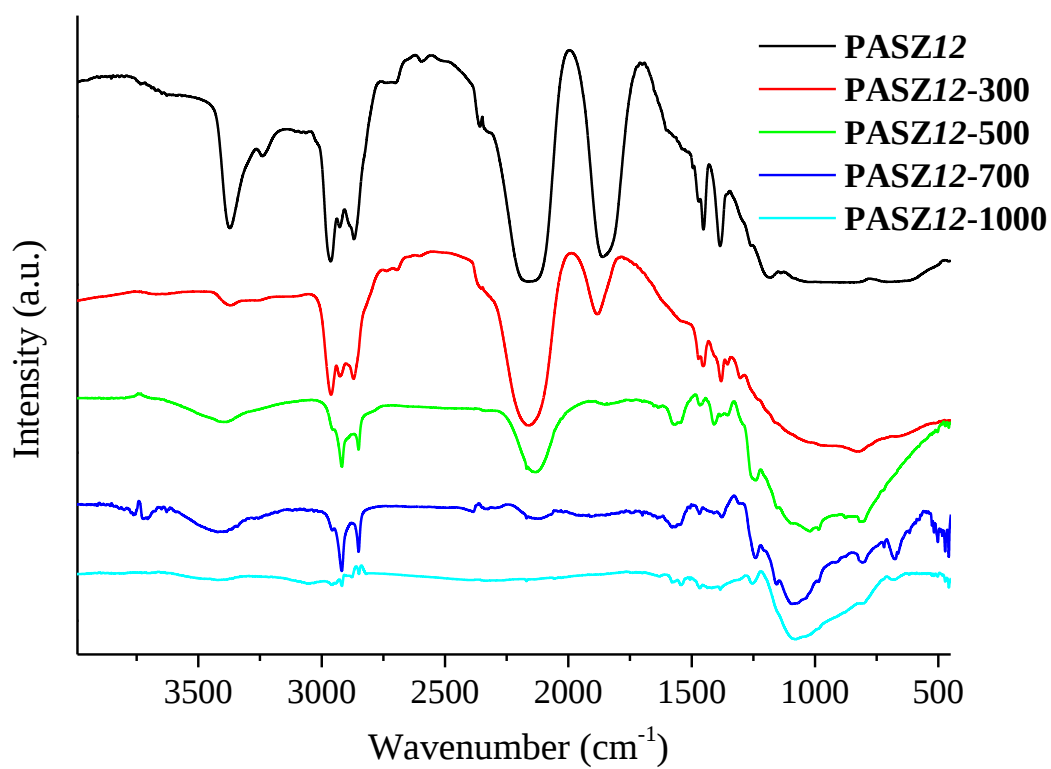


Figure SI3. FT-IR experiments of **PASZ12** and its heat-treated samples isolated at different temperature during the polymer-to-ceramic conversion.

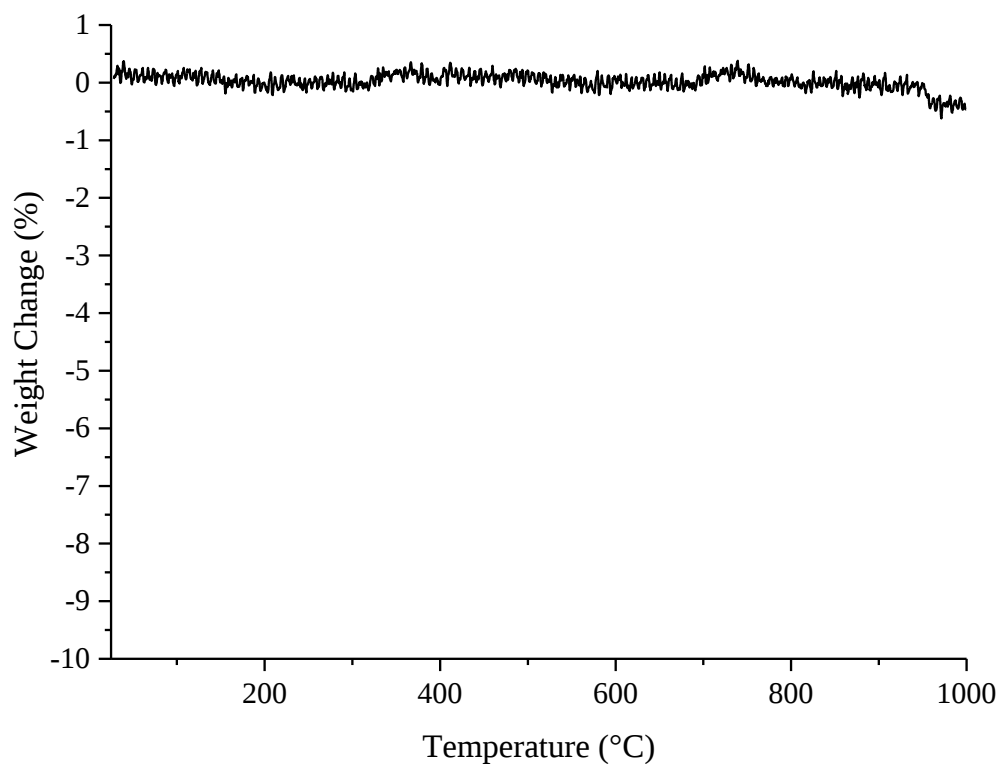


Figure SI4. TGA curve of a “test sample” obtained by pyrolysis under nitrogen at 1000 °C of **PASZ12** without infiltration. TGA was performed under ammonia up to 1000°C with a dwelling time of 5h (*See experimental part for details*).

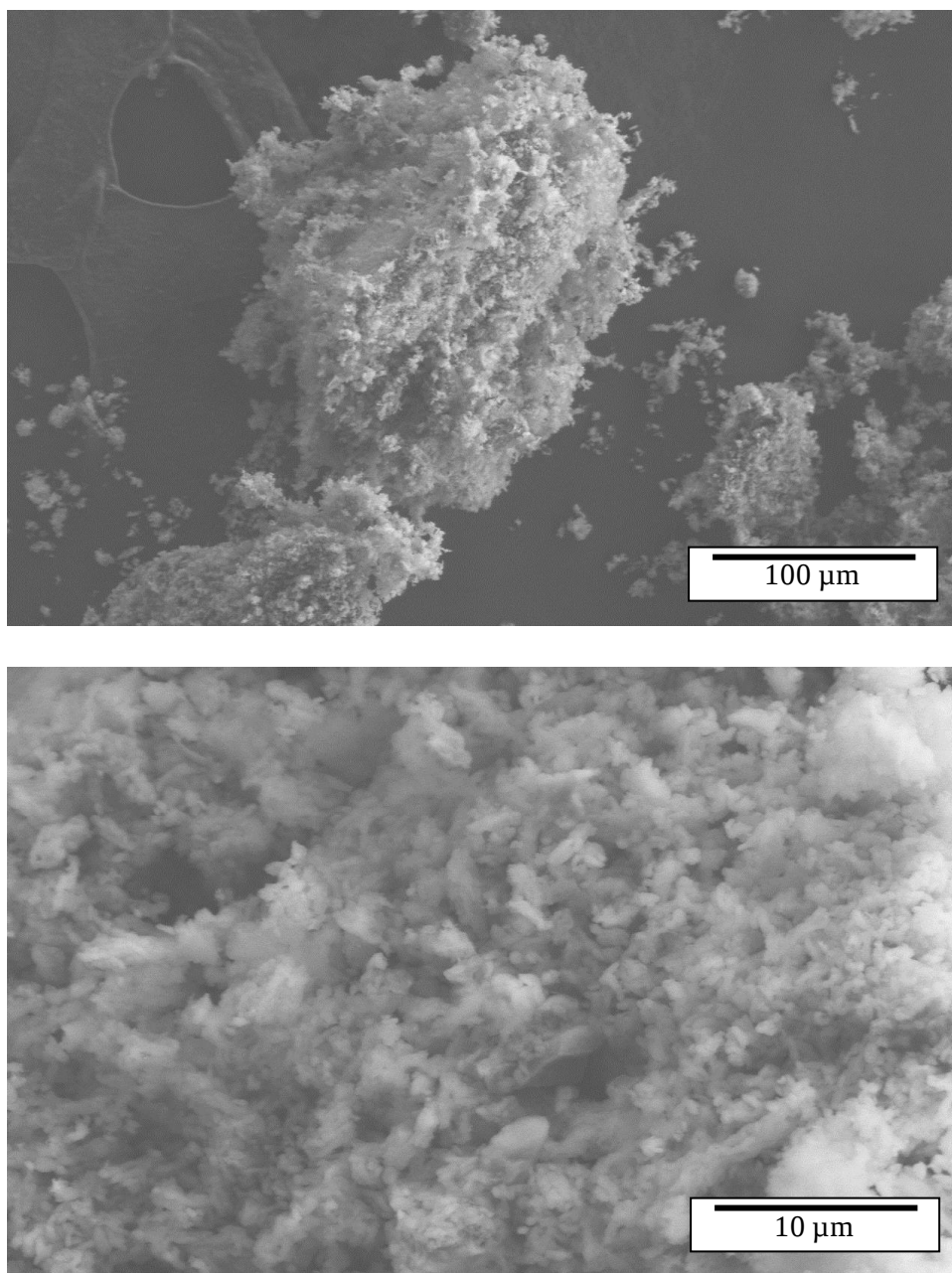


Figure SI5. SEM images of the *ompSi/Al/C/N12* sample.

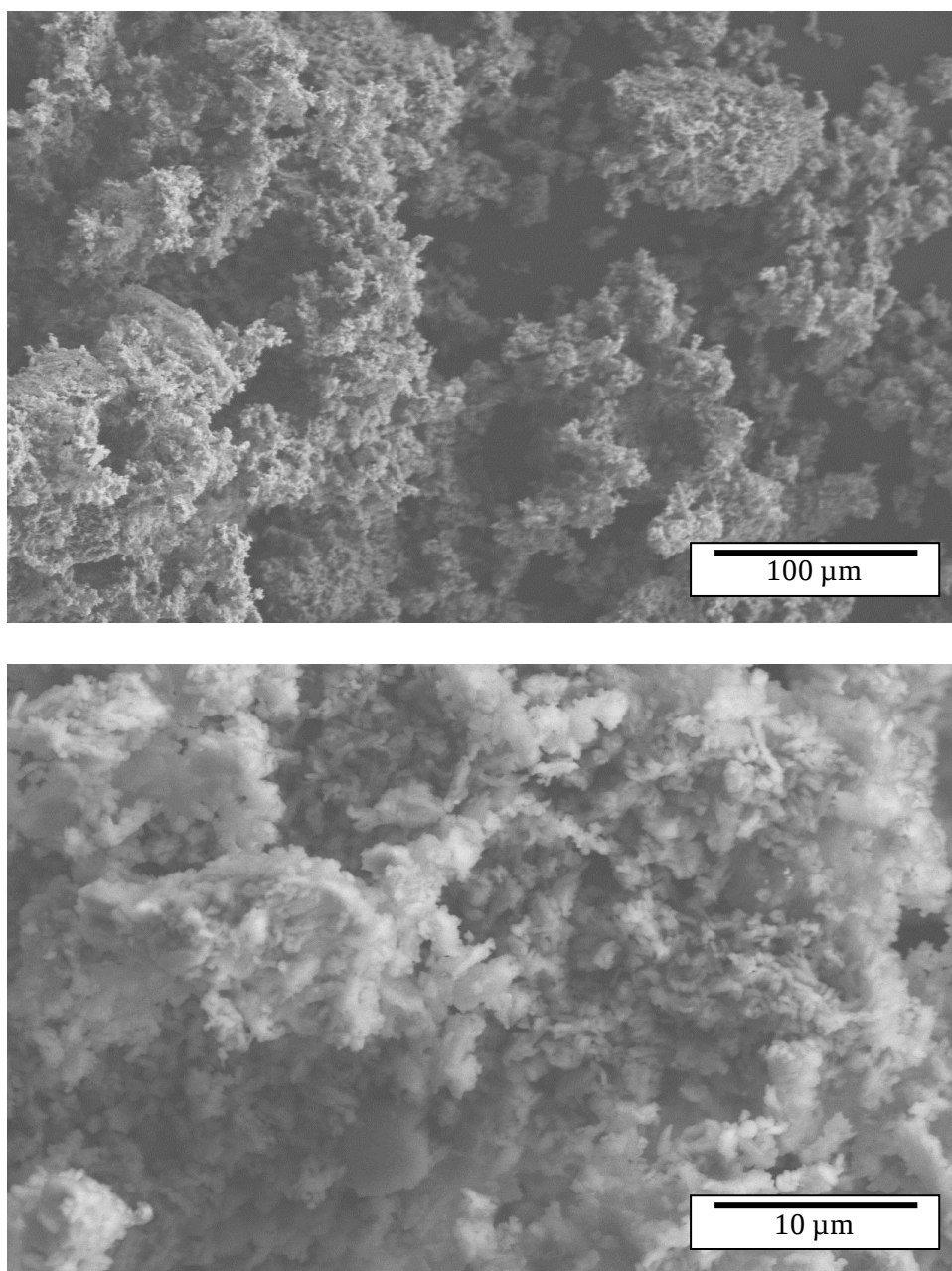


Figure SI6. SEM images of the *ompSi/Al/C/N12* sample after heat-treatment in air at 1000 °C (dwelling time of 5 h).

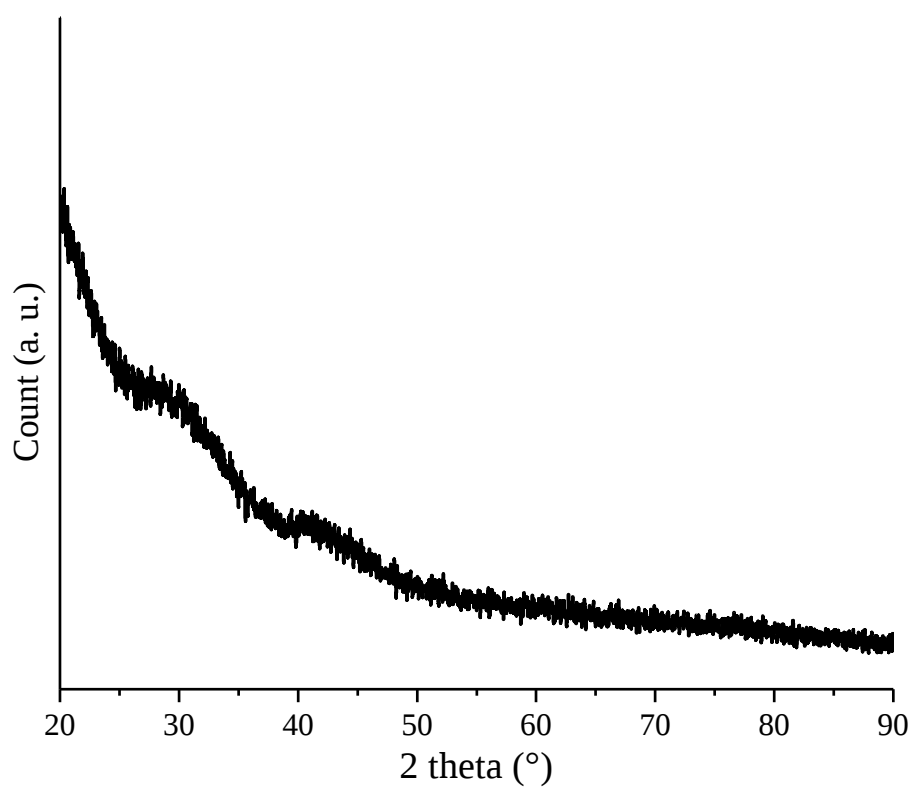


Figure SI7. XRD pattern of the *ompSi/Al/C/N12* sample after heat-treatment in static air at 1000 °C (dwelling time of 5 h) with a moisture level of 35 %.

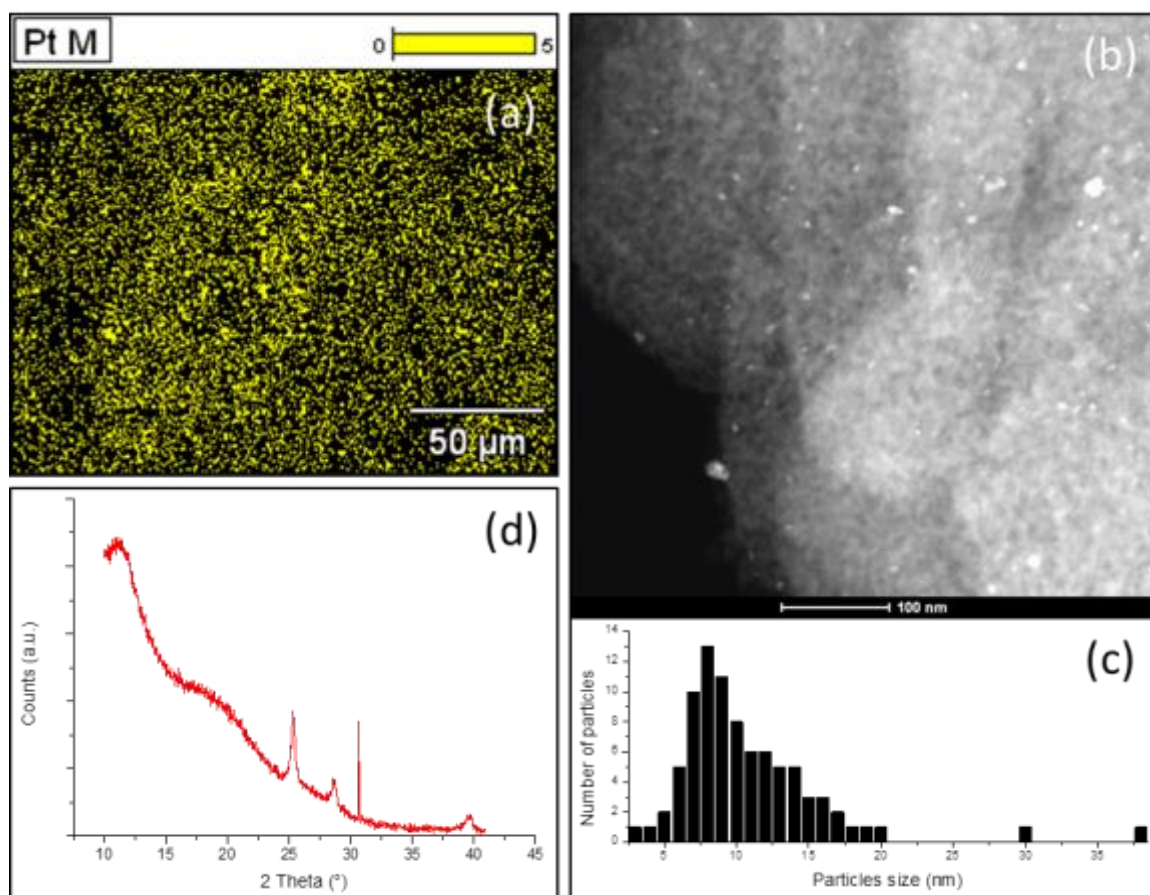


Figure SI8. Pt@ompSi/Al/C/N11: (a) EDS elemental map overlapping Pt (yellow), (b) TEM image and (c) related plot for the dispersion of the Pt (nano)particles, and (d) XRD pattern.

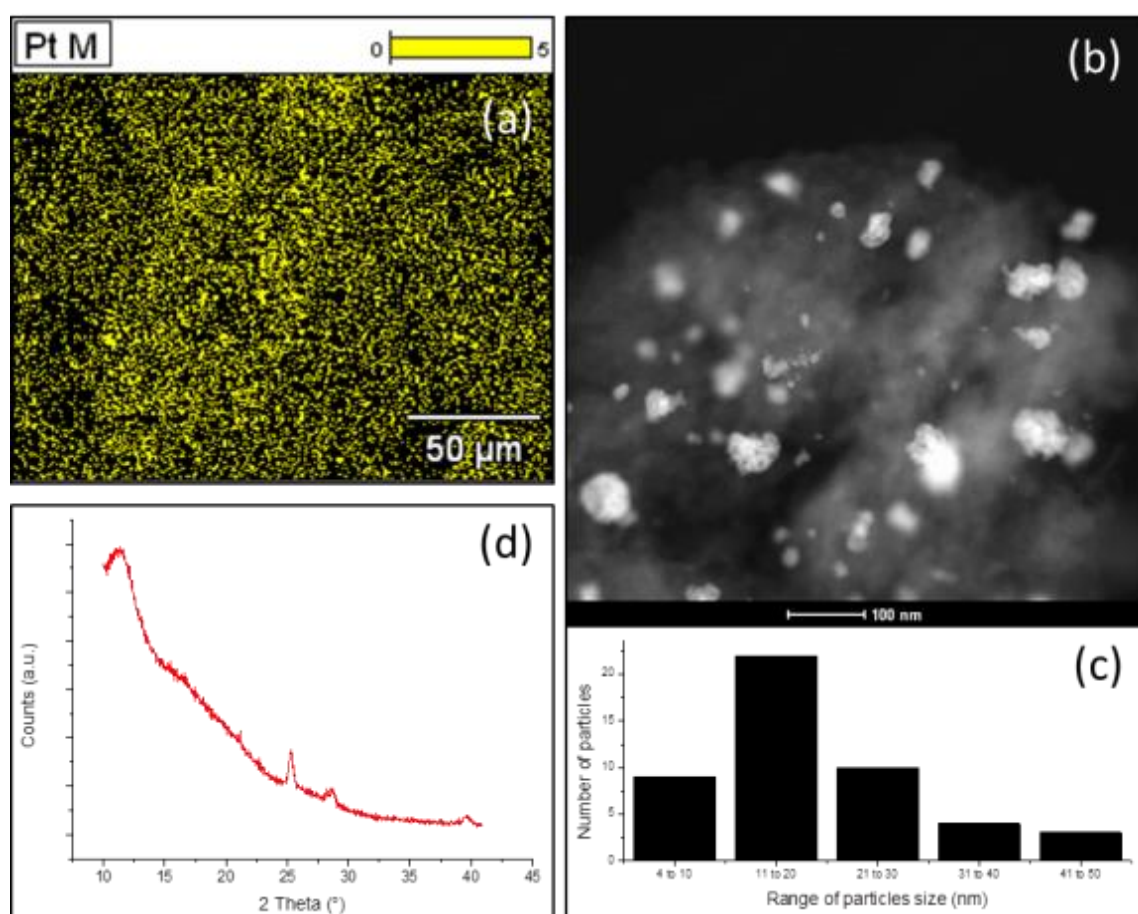


Figure SI9. Pt@ompSi/Al/C/N13: (a) EDS elemental map overlapping Pt (yellow), (b) TEM image and (c) related plot for the dispersion of the Pt (nano)particles, and (d) XRD pattern.