ELECTRONIC SUPPORTING INFORMATION

Polyoxometalate-doped electrospun nanofibers mats as active catalysts for the production of clean fuels under solvent-free systems

Fátima M. Mirante,[a] Maryam Salimian,[b] Paula A.A.P. Marques,[b] Carlos M. Granadeiro,[a,*] Salete S. Balula[a,*]

[a]*LAQV-REQUIMTE, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, 4169-007 Porto, Portugal*
[b]*Centre for Mechanical Technology and Automation (TEMA) & Department of Mechanics, 8 University of Aveiro, 3810-193 Aveiro, Portugal*

[*] corresponding authors. E-mail: cgranadeiro@fc.up.pt; sbalula@fc.up.pt

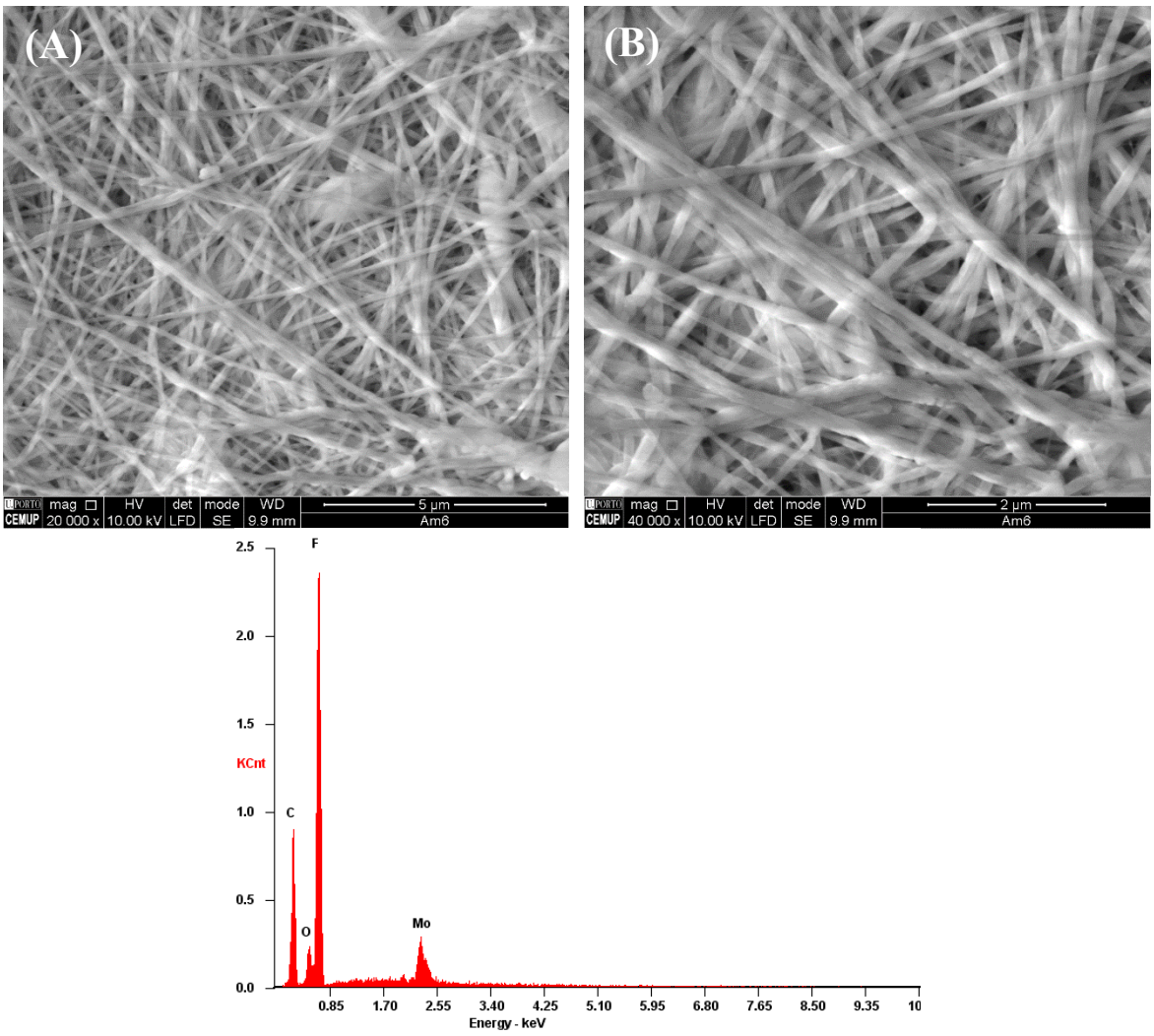

Fig. S1 SEM micrographs of the 2.6PMo_{12}@P(VDF-TrFE) nanofiber mat at (A) 20000x in SE mode, (B) 40000x in SE mode, and (C) EDS spectrum.

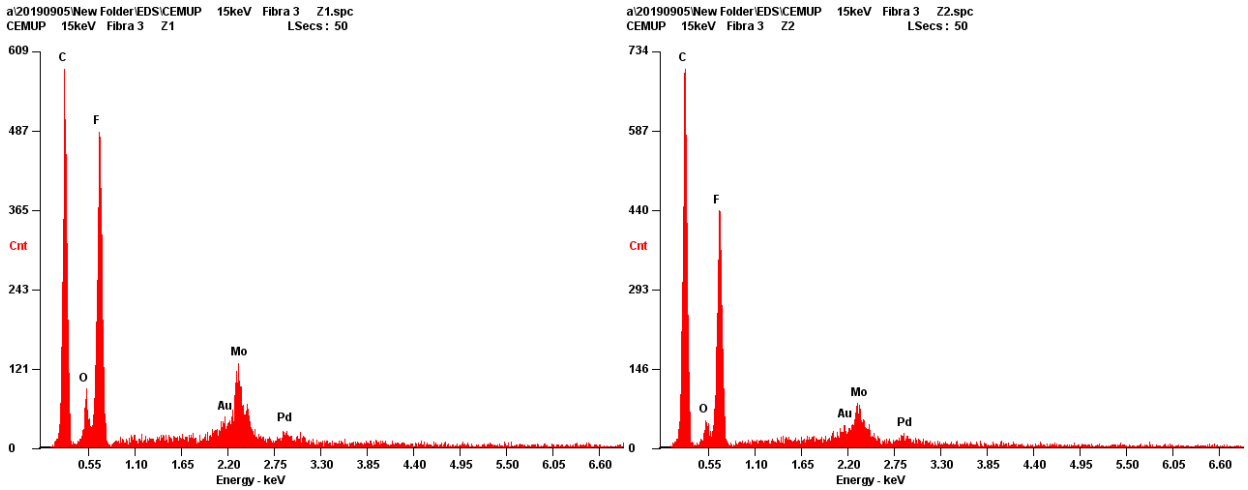

Fig. S2 EDS spectra for Z1 (left) and Z2 (right) areas of PMo_{12}@P(VDF-TrFE) nanofiber mat (Figure 2B).

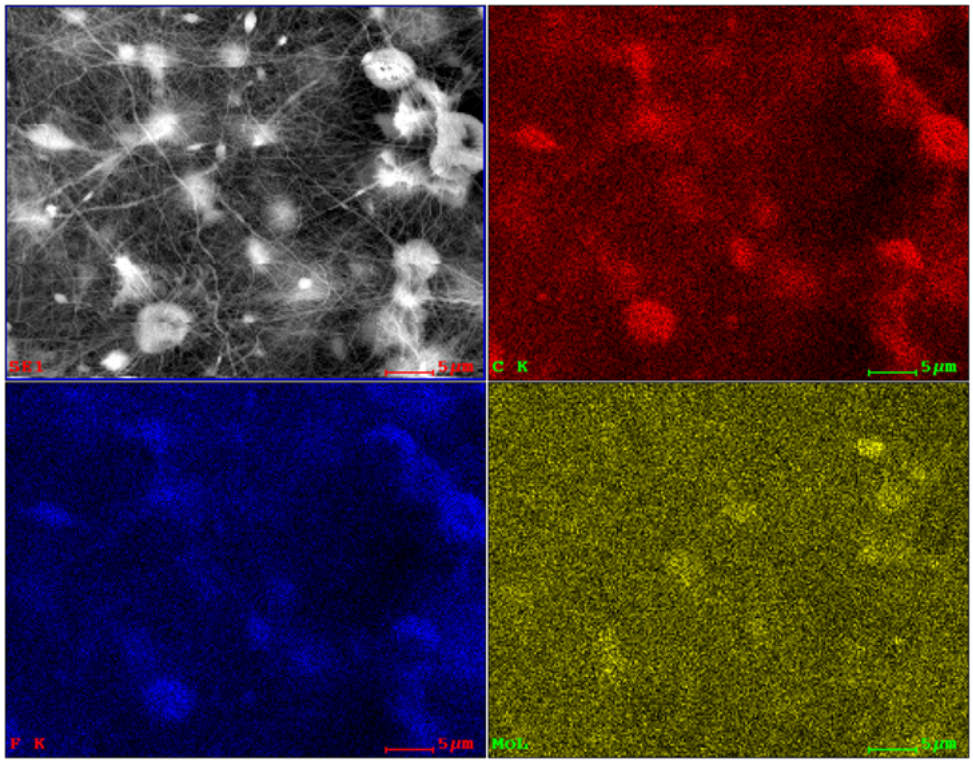

Fig. S3 SEM image and EDS elemental mapping for the PMo_{12}@P(VDF-TrFE) nanofiber mat.

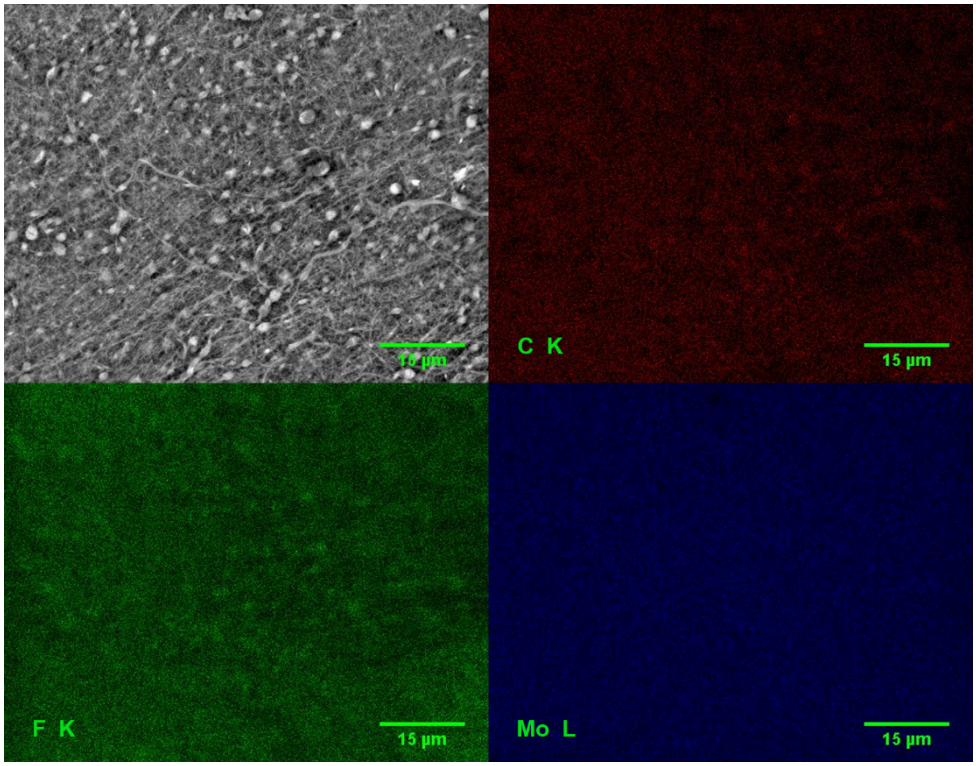

Fig. S4 SEM image and EDS elemental mapping for the 2.6PMo_{12}@P(VDF-TrFE) nanofiber mat.

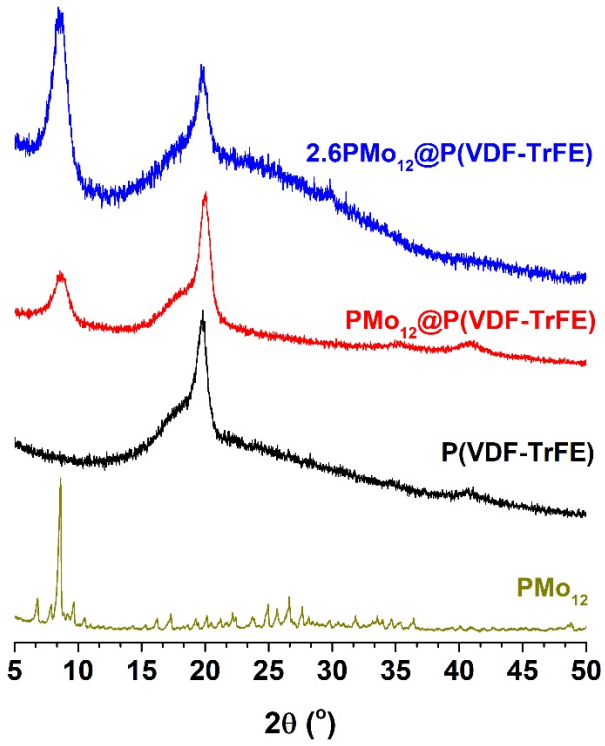

Fig. S5 XRD patterns of PMo_{12}, isolated P(VDF-TrFE), PMo_{12}@P(VDF-TrFE) and 2.6PMo_{12}@P(VDF-TrFE) nanofiber mats.

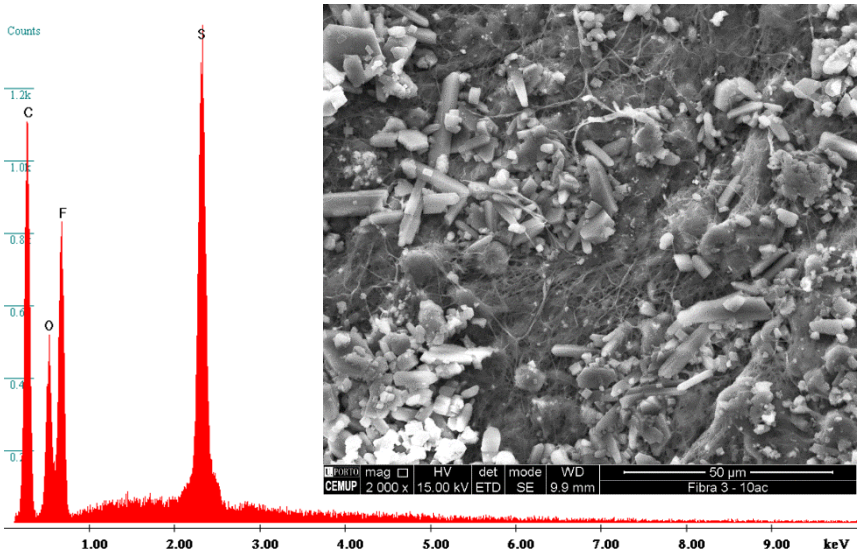

Fig. S6 SEM image and EDS spectrum of the PMo_{12}@P(VDF-TrFE) nanofiber mat after ten consecutive ODS cycles.

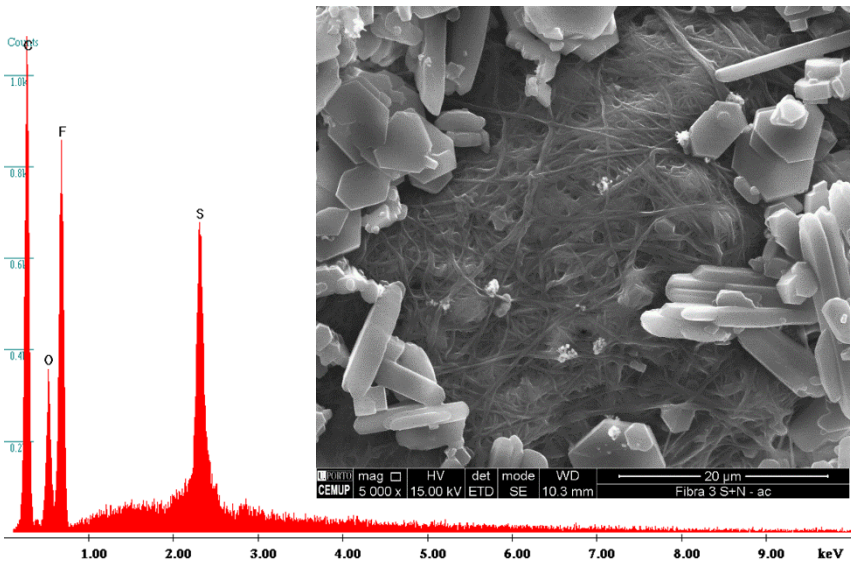

Fig. S7 SEM image and EDS spectrum of the PMo_{12}@P(VDF-TrFE) nanofiber mat after three consecutive ODS/ODN cycles.

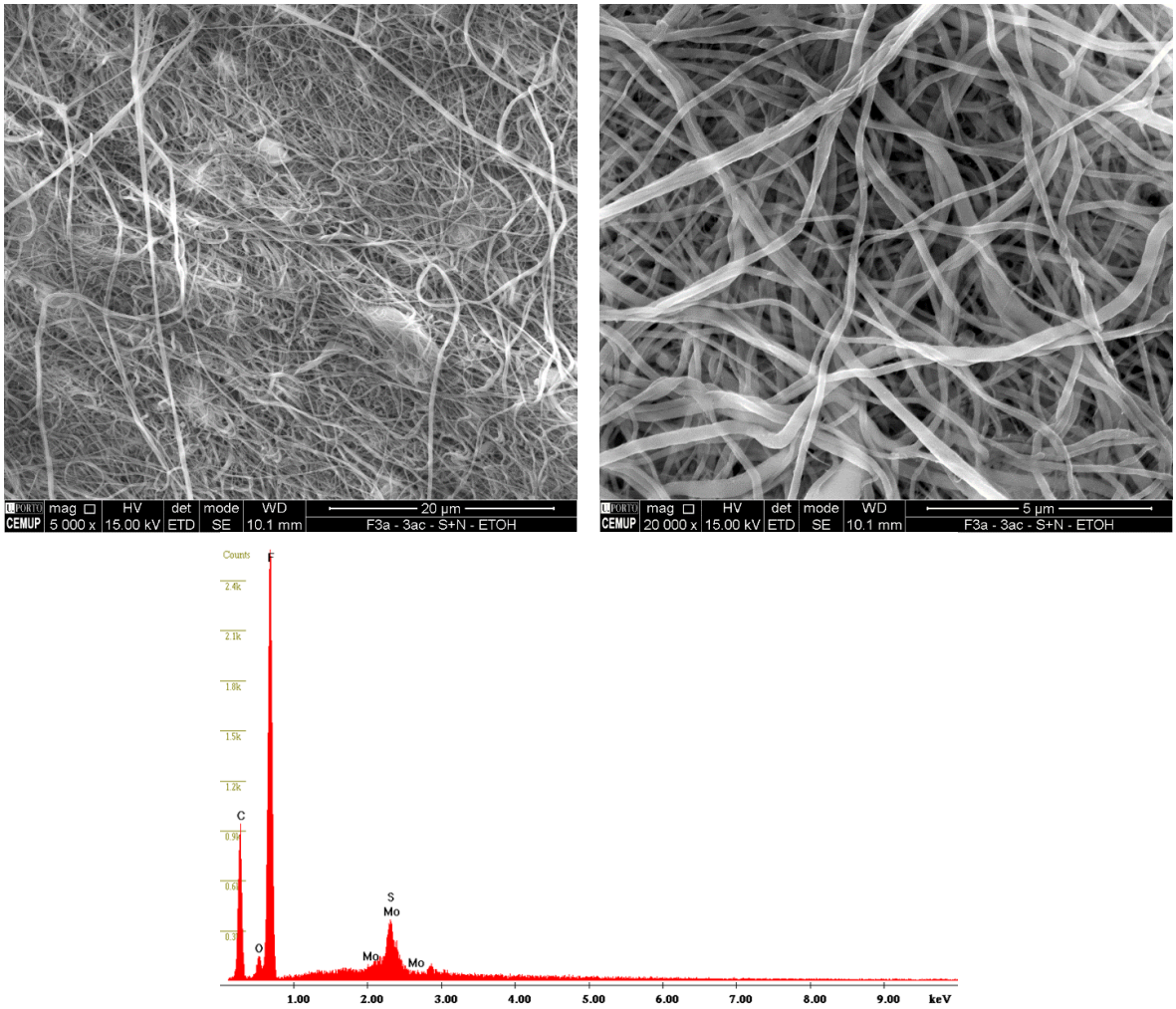

Fig. S8 SEM micrographs of the PMo_{12}@P(VDF-TrFE) nanofiber mat after three ODS/ODN cycles washed with ethanol at (A) 5000x, (B) 20000x in SE mode, and (C) EDS spectrum.

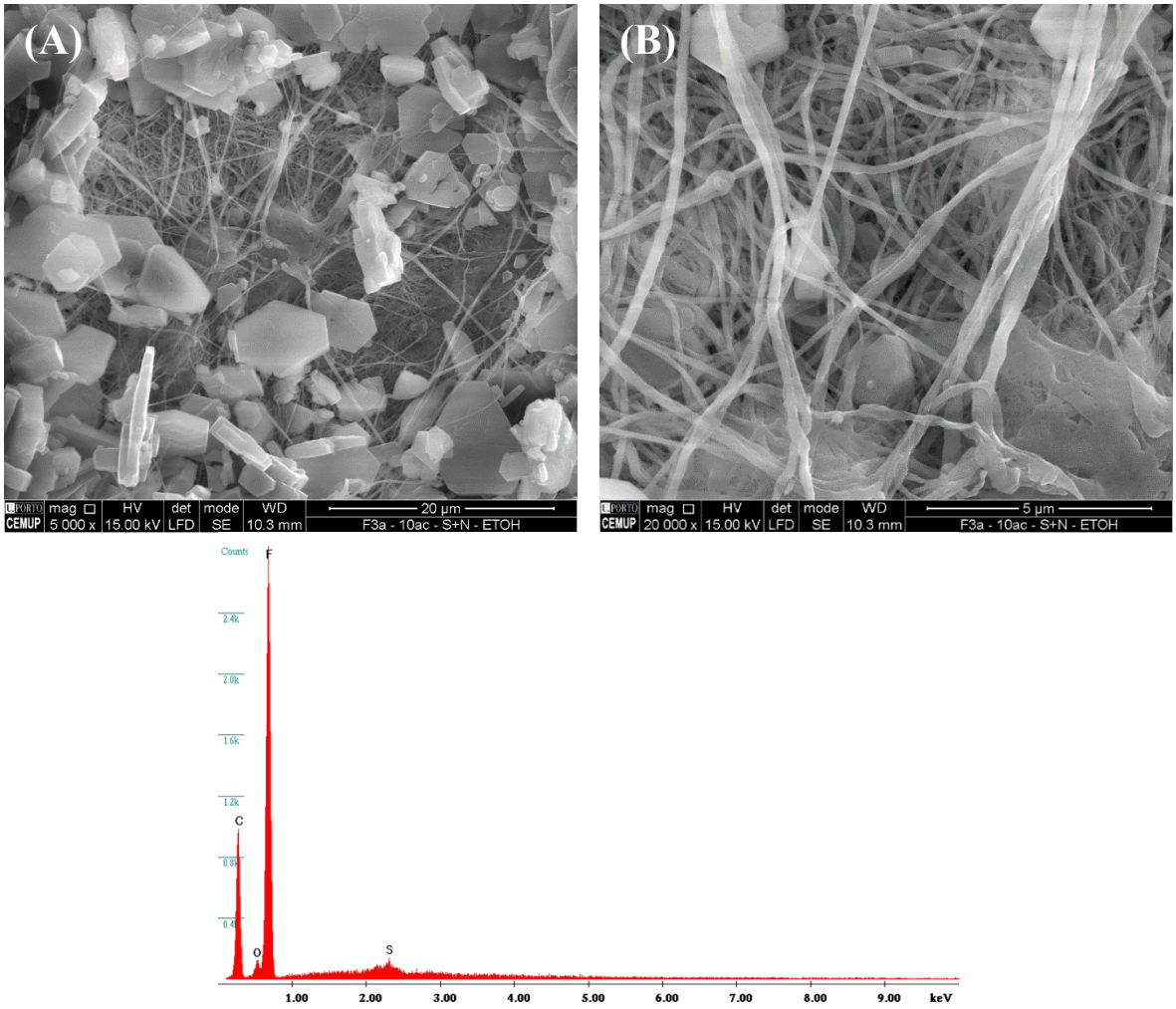

Fig. S9 SEM micrographs of the PMo_{12}@P(VDF-TrFE) nanofiber mat after ten ODS/ODN cycles washed with ethanol at (A) 5000x, (B) 20000x in SE mode, and (C) EDS spectrum.

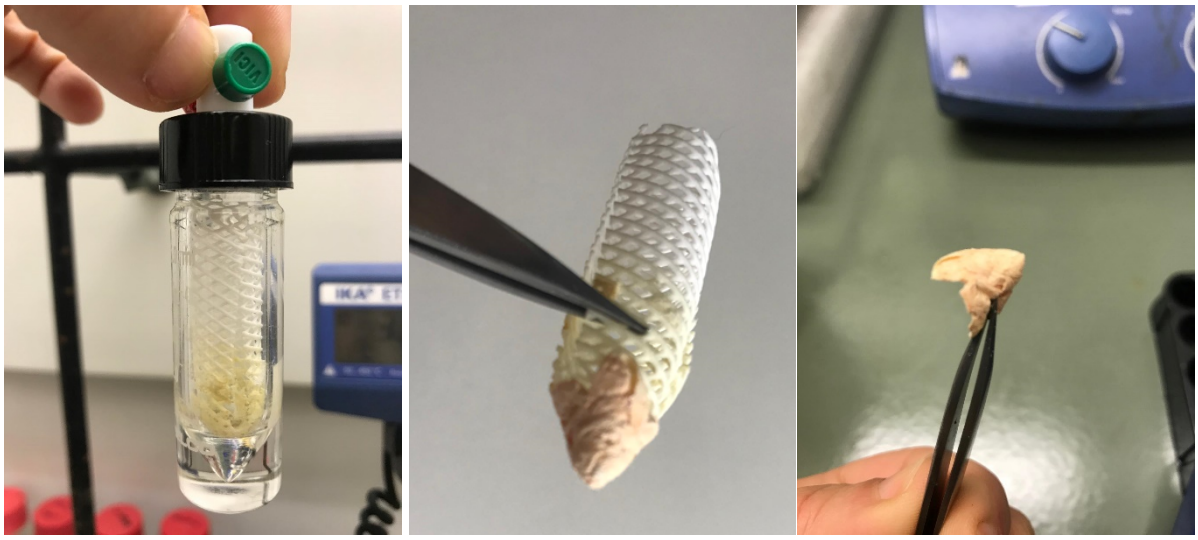

Fig. S10 Digital photographs of the PMo_{12}@P(VDF-TrFE) mat with a protective grid for ODS/ODN reactions.

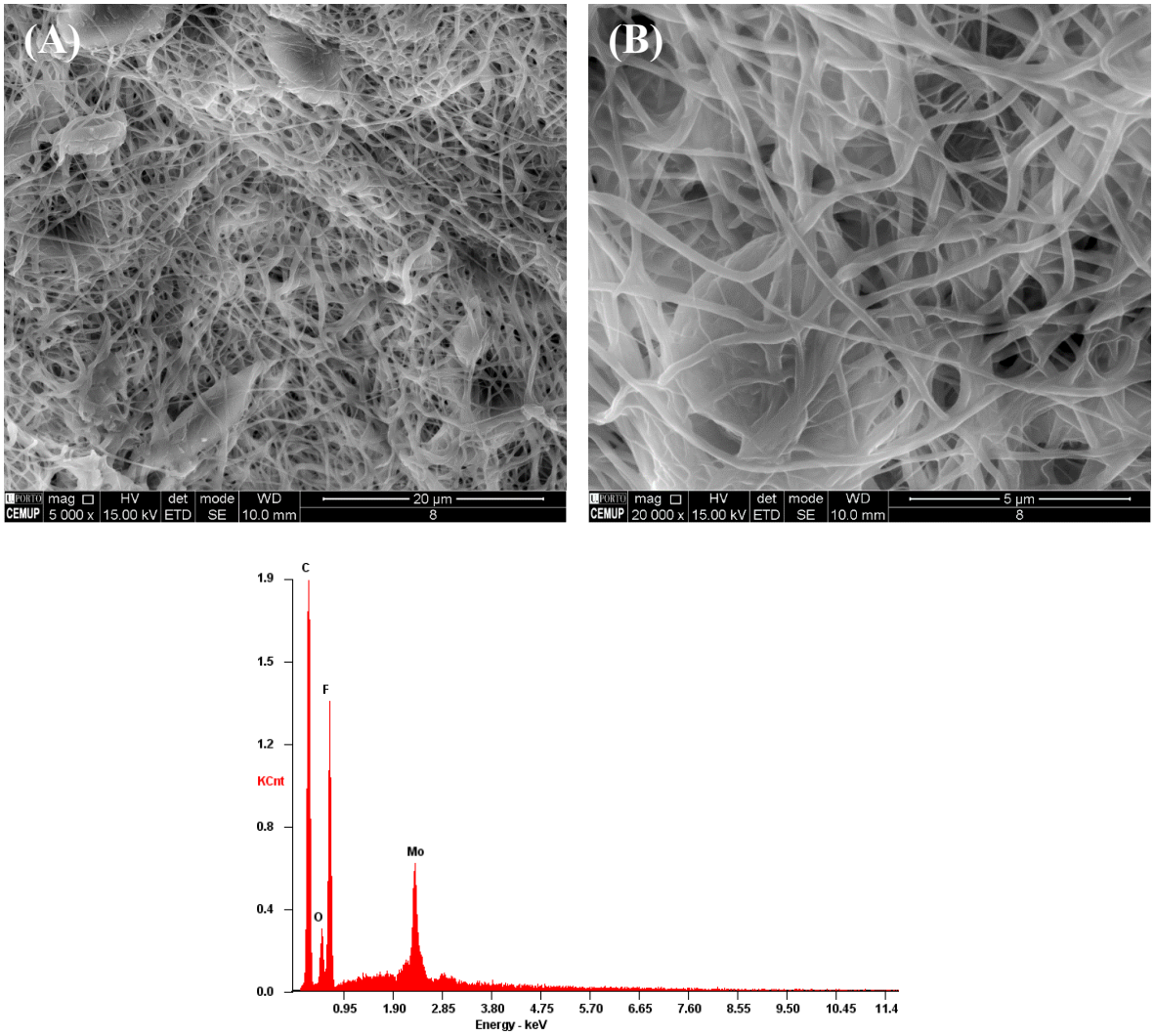

Fig. S11 SEM micrographs of the PMo_{12}@P(VDF-TrFE) nanofiber mat using protective grid after ten ODS/ODN cycles at (A) 5000x, (B) 20000x in SE mode, and (C) EDS spectrum.

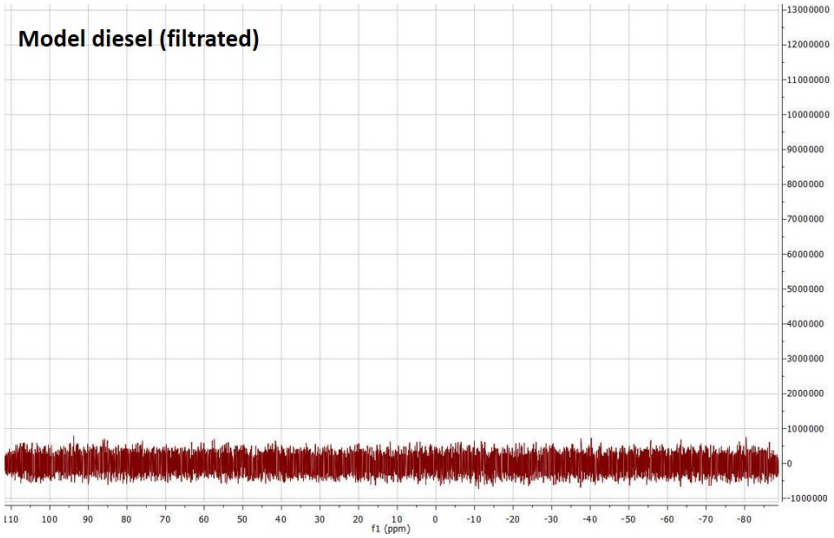

Fig. S12 ^{31}P NMR spectrum of the filtrated model diesel of the leaching test using the PMo_{12}@P(VDF-TrFE) mat with grid.

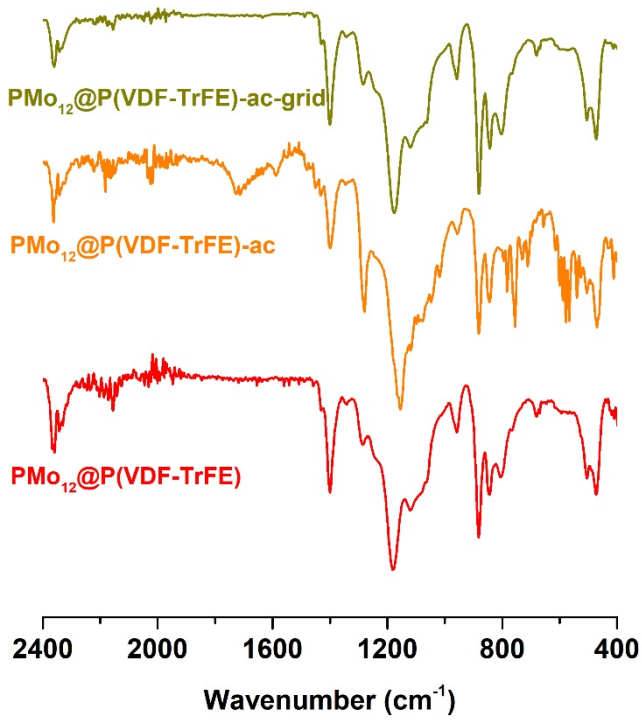

Fig. S13 FT-IR/ATR spectra of the PMo_{12}@P(VDF-TrFE) mat as-prepared, after catalytic use (ac) and after catalytic use with protective grid (ac-grid).