



*Supporting information*

# Optimization of Isotactic Polypropylene Nanocomposite Content of Tungsten Carbide for Material Extrusion 3D Printing

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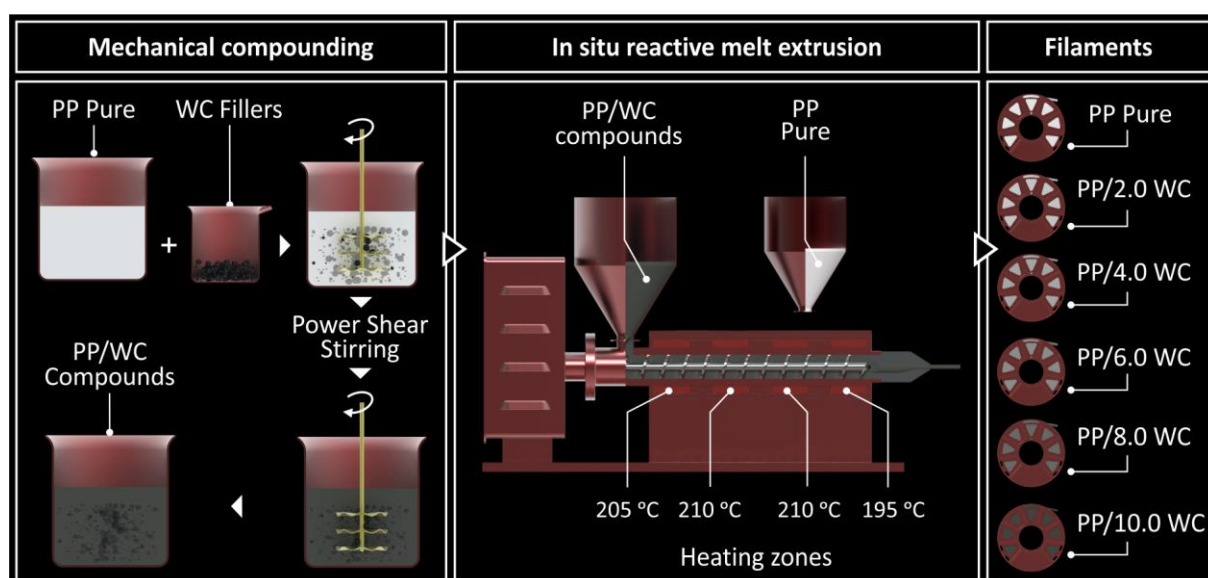
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## 2. Materials and Methods

Figure S1 shows the investigational process that was utilized to create the specimens for testing and the subsequent examination of their rheological, morphological, mechanical, and thermal characteristics.



**Figure S1.** The experimental procedure's workflow: (A) raw materials; (B) drying process; (C) filament extrusion; (D) filament drying; (E) filament quality control; (F) filament mechanical testing; (G) samples 3D printing; (H) samples inspection; (I) samples mechanical testing (three-point-bending); (J) samples mechanical testing (impact test); (K) rheology testing; (L) morphological analysis with SEM.



**Figure S2.** Schematic for the filament production process in the extruder.