## Hypercrosslinked polymers from the mechanosynthesis of coal tar products

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Hypercrosslinked polymers (HCPs) represent a class of entangled polymers where the high level of crosslinking results in porous materials (typically in the nano/meso porosity range) and stable rigid structures. These HCPs, due to the interesting properties just mentioned, have proven to be valuable in several applications such as sensors and catalysts supports, chromatographic separation, gas adsorption, heavy metal ions and hazardous dyes removal, drug delivery, etc. [1]. However, they are usually produced using environmentally unfriendly precursors, such as benzene and its derivatives, and following time-consuming solvent-based Friedel-Crafts reactions. In this sense, the literature has recently focused on the use of a greener and faster reaction protocol, mechanosynthesis, which allows to obtain similar products within a few minutes and to avoid the use of hazardous solvents. Thus, by modifying different parameters such as ball mill and balls material, ball mill volume, size and number of balls reaction time, rotating or shaking speed, crosslinker/monomer and catalyst/monomer ratio, good yields to highly porous HCPs can be obtained [2]. Nonetheless, still hazardous precursors are frequently targeted [1,2]. Therefore, in this study, we have taken advantage of low value-added coal tar products derivatives to valorise them as HCP precursors. The ultimate objective of this study is to employ these HCPs for the removal of organic pollutants from wastewater.

Acknowledgements: This work was partially funded by the Research Fund for Coal and Steel (RFCS) of the European Union (EU) under Grant Agreement No 101033964 (project UCGWater+). A.M.B-L. acknowledges the Margarita Salas postdoctoral grant received (SOL-RPU-59).

## References

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