

Title: Influence of waste glass in the foaming process of open cell porous ceramic as filtration media for industrial wastewater

Authors name: Andrei Shishkin¹, Hakim Aguedal^{2,3}, Gaurav Goel^{4,5*}, Julite Peculevica¹, Darryl Newport⁶, Jurijs Ozolins¹

Affiliations: ¹Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Faculty of Materials Science and Applied Chemistry, Riga Technical University, Pulka 3, Riga, LV-1007, Latvia.

²Laboratoire de Valorisation des Matériaux, Département de Génie des Procédés, Faculté des Sciences et de la Technologie, Université Abdelhamid Ibn Badis – Mostaganem, Bp. 227, 27000 Mostaganem, Algeria.

³Laboratoire Ressources Naturelles Sahariennes, Département des Sciences de la Nature et de la Vie, Faculté des Sciences et de la Technologie, Université Ahmed Draia – Adrar 01000, Algeria.

⁴School of Engineering, London South Bank University, SE1 0AA, United Kingdom.

⁵School of Aerospace, Transport and Manufacturing, Cranfield University, MK430AL, UK

⁶Sustainability Research Institute, University of East London, London E16 2RD, United Kingdom.

*Corresponding author address:

Centre for Advanced Materials

London South Bank University, SE1 0AA, UK

Email: : goelg@lsbu.ac.uk; goel2001@gmail.com

Submitted to ***Journal of Cleaner Production***



Fig. S1: CF with 5 wt.% MC content fired at 900°C, optical microscope at magnification X200 times.

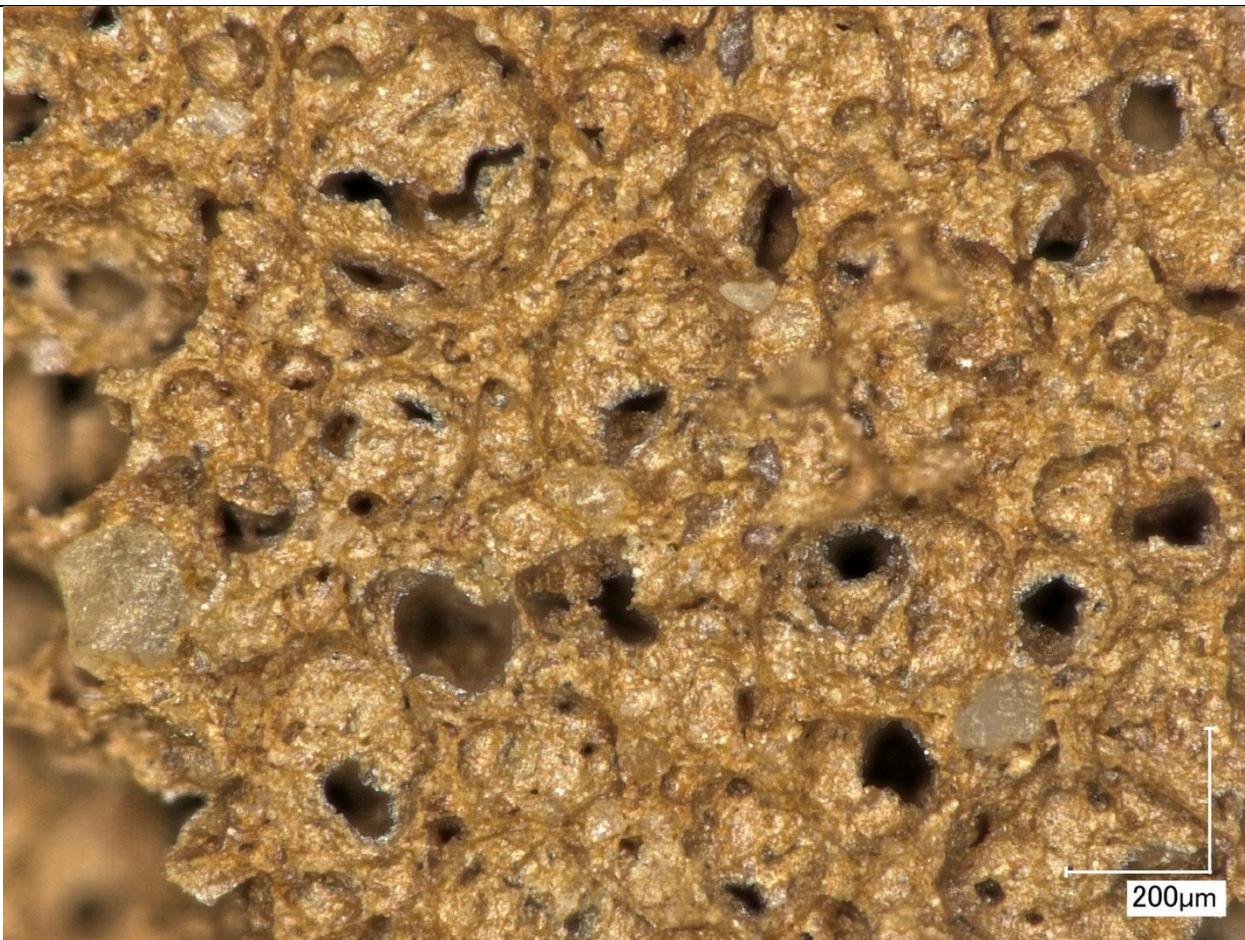


Fig. S2: CF with 10 wt.% MC content fired at 900°C, optical microscope at magnification X200 times.



Fig. S3: CF with 5 wt.% MC content fired at 1050°C, optical microscope at magnification X200 times.

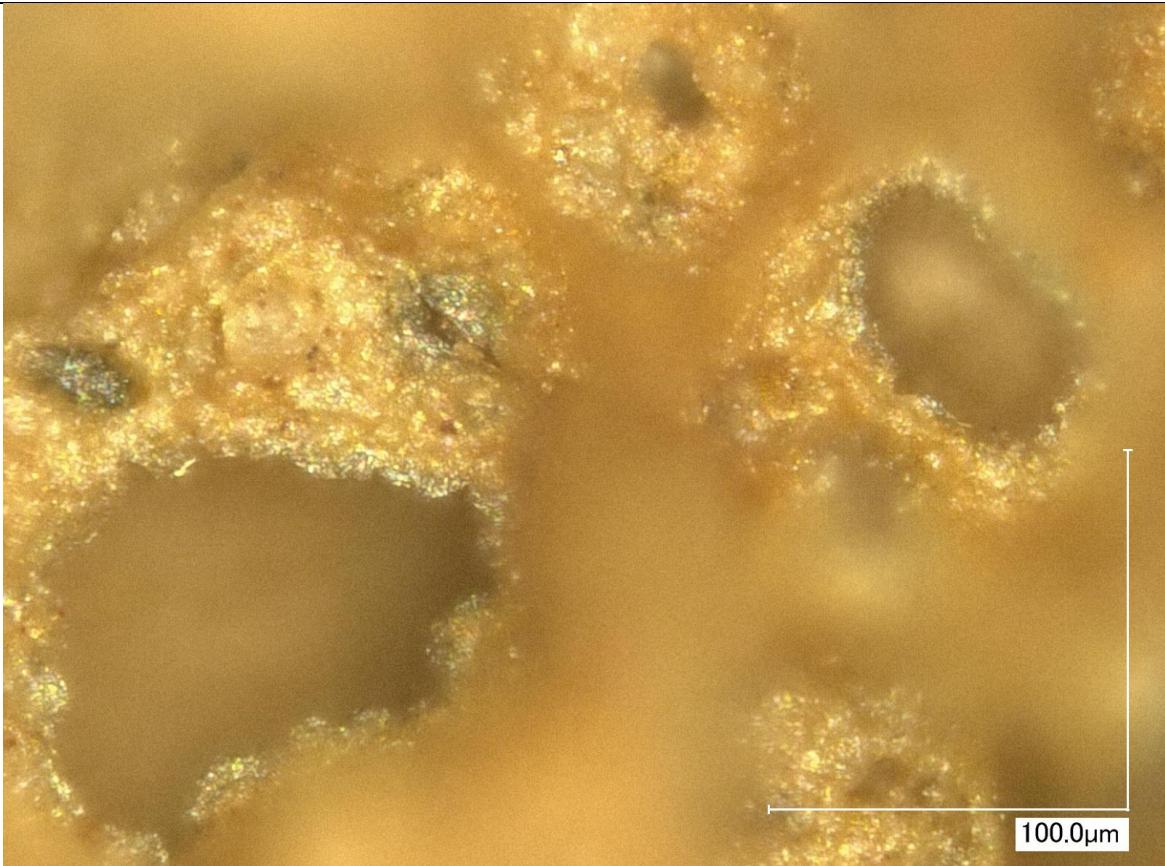


Fig. S4: CF with 10 wt.% MC content fired at 900°C, optical microscope at magnification X1000 times.

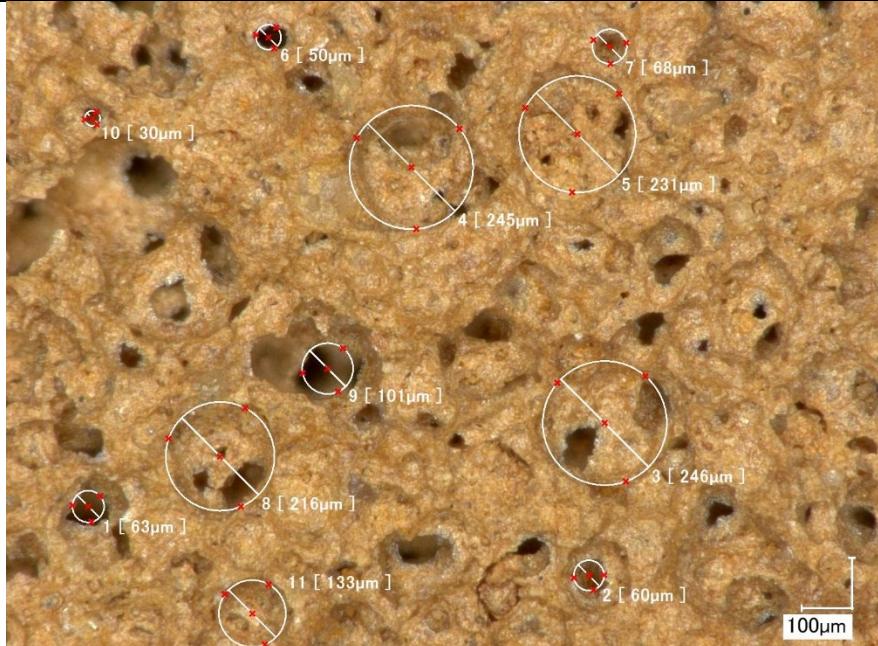


Fig. S5: Pore size measurements of CF with 7 wt.% MC content fired at 900°C, optical microscope at magnification X200 times.

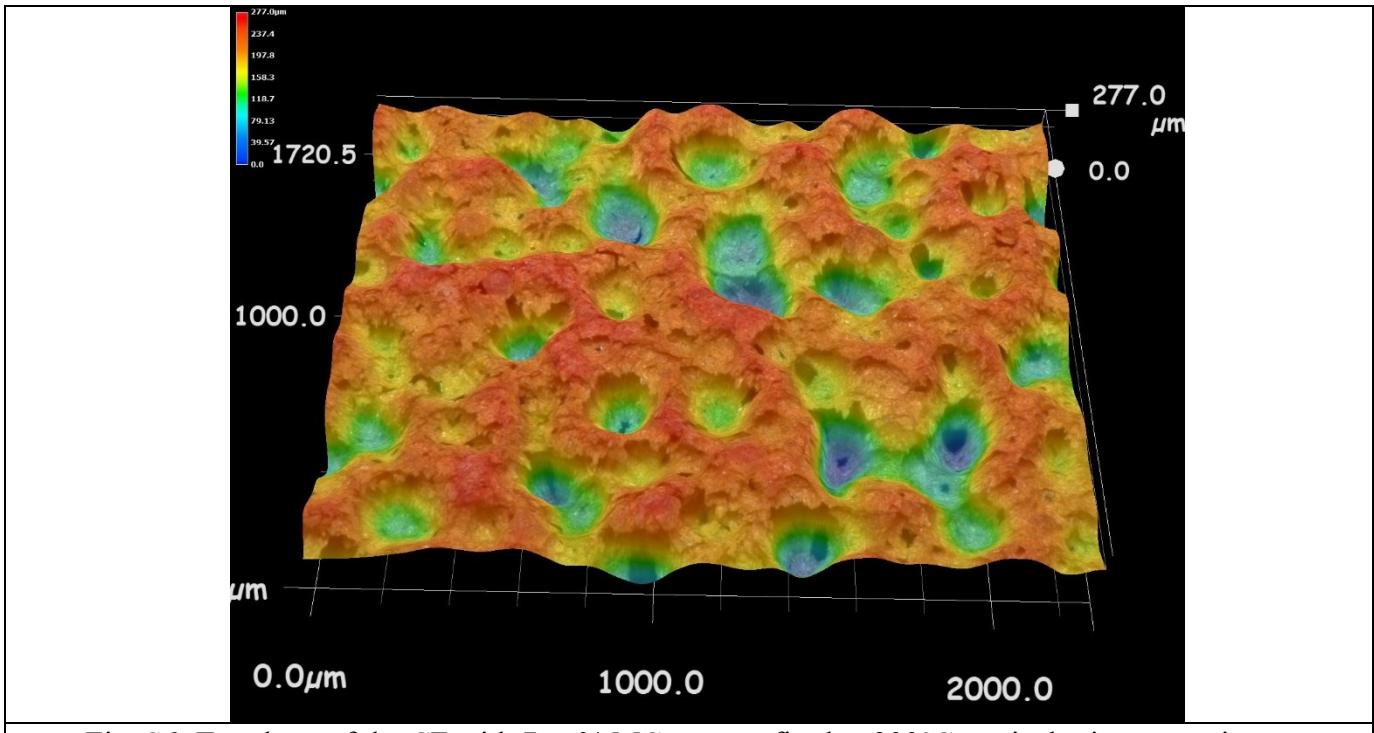


Fig. S6: Topology of the CF with 7wt.% MC content fired at 900°C, optical microscope image at magnification X200 times interpretation by Keyence™ software

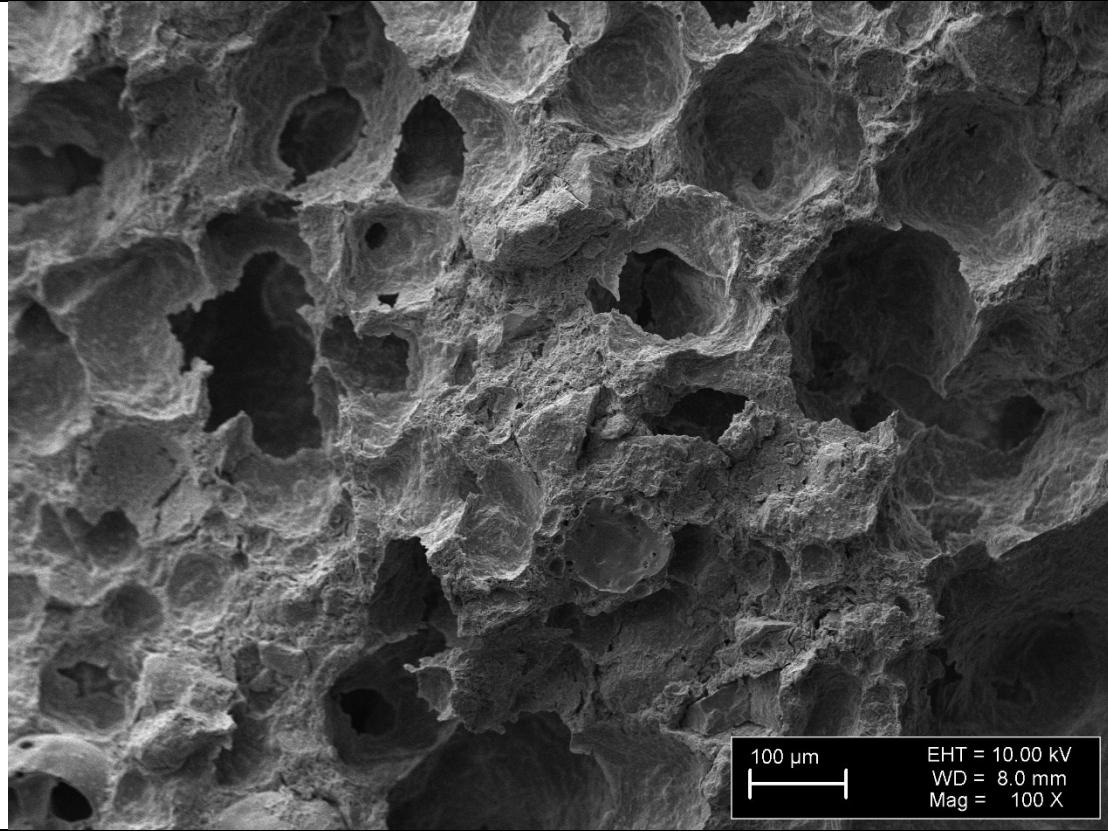


Fig. S7: CF with 10 wt.% MC content fired at 900°C, SEM image X100 times.



Fig. S8: CF with 10 wt.% MC content fired at 900°C, digital photo



Fig. S9: CF with 7 wt.% MC content fired at 900°C, digital photo



Fig. S10: CF with 7 wt.% MC content fired at 800°C, digital photo



Fig. S11: Collapsed after firing at 1000 °C CF without glass addition.