Role of the Rheology in the New Emerging Technologies as 3D Printing

María D Torres*

Department of Chemical Engineering, Universidade de Santiago de Compostela, rúa Lope Gómez de Marzoa, Santiago de Compostela, E-15782, Spain

Nowadays, the thermo-rheological measurements are essential for all processing technologies, being critically relevant in those emerging technologies as 3D printing, as indicated in several comprehensive works [1,2]. Monitoring of the thermo-rheological behaviour of the materials during processing is a key factor in their manufacturing [3]. e current trends in rheological measurements for 3D printing are: steady-shear ow curves (apparent viscosity *vs.* shear rate), oscillatory data (viscous and elastic moduli *vs.* angular frequency), creep and recovery curves (compliance modulus *vs.* time), temperature sweeps (apparent viscosity or viscoelastic moduli *vs.* temperature) or tri biological pro les. Above measurements have been extensively used to characterize materials and select suitable candidates for 3D-printing [4]. In this context, relations between materials mechanical characteristics and 3D printability have been intended [5].

It should be highlighted that 3D printing is more than just an innovation – it is the future of the manufacturing industries [6]. Most of the research works on emerging printing technologies for non-food applic]. Id CID 7w [(t)-5 (en-Bo)/e(ur)13 (p)11.1 1ting technolo (b)7 ntn-iz pr(s t)-6 (h)hnolo (b)7 nteerr 3D-ear 6d.5 .1 (er4c[()6 (er)-5.9 (i)(p)-9 f ten-Ben-Bomanood apld be216(i)-3 (a)7w [(t)-5 (en-Bo)/-5.9 (i) 4(en8.9r)dpa1.6 ().9-6.cc (n7b t6) (rbt)-5 (en-Bo(e5e)-5TJn)4 (o)12 -6D 7wuan5en(v2

***Corresponding author:** María D Torres, Department of Chemical Engineering, Universidade de Santiago de Compostela, rúa Lope Gómez de Marzoa, Santiago de Compostela, E-15782, Spain, Tel: +34 881816752; E-mail: mariadolores.torres.perez@usc.es

Received September 13, 2017; **Accepted** September 20, 2017; **Published** September 27, 2017

Citation: Torres MD (2017) Role of the Rheology in the New Emerging Technologies as 3D Printing. Rheol: open access 1: e103.

Copyright: © 2017 Torres MD. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

4. Tubi CR, Guitian F, Gi LA (2016) Fabrication of ZnO periodic structures by 3D printing. J Eur Ceram Soc 36: 3409-3415.

5. as promising food material for 3D printing. J Food Eng.

6. Jia F, Wang X, Mustafee N, Hao L (2016) Investigating the feasibility of supply chain-centric business models in 3D chocolate printing: A simulation study. Technol Forecast Soc Change 102: 202-213

as prdesign: Status red0 -1spectsr 3D printing Food EngJ Food Eng