References on the Use of LACTEL® Polymers in Printing Applications

L00285 Chia HN, Wu BM. High-resolution direct 3D printed PLGA scaffolds: print and shrink. Biofabrication 2015; 7(1):1-11. >>> Poly(DL-lactide-co-glycolide); 85:15; IV 0.63 dL/g; Tissue engineering (scaffold); microparticles formed by emulsion solvent evaporation; 3D printing.

L00313 Castro NJ, O'Brien J, Zhang LG. Integrating biologically inspired nanomaterials and table-top stereolithography for 3D printed biomimetic osteochondral scaffolds. Nanoscale 2015; 7:14010-14022. >>> Poly(DL-lactide-co-glycolide); Drug delivery (nanospheres, TGF-B1); Tissue engineering (scaffold); nanospheres fabricated by coaxial electrospraying; 3D printing of PLGA.

L00340 Castro NJ, O'Brien C, Zhang LG. Integrating biologically inspired nanomaterials and table-top stereolithography for 3D printed biomimetic osteochondral scaffolds. Nanoscale 2015; 7:14010-14022. >>> Poly(DL-lactide-co-glycolide); Tissue engineering (scaffold, 3D printing); "3D printer and the nano-ink (i.e., nHA + nanosphere + hydrogel) were employed to fabricate a porous and highly interconnected osteochondral scaffold with hierarchical nano-to-micro structure and spatiotemporal bioactive factor gradients" (pg. 14010); 3D scaffold design and printing (pg. 14012).

L00341 Castro NJ, Zhang LG, O'Brien C. Biomimetic Biphasic 3-D Nanocomposite Scaffold for Osteochondral Regeneration. AIChE Journal 2014; 60(2):432-442. >>> Poly(DL-lactide-co-glycolide); Tissue engineering (scaffold, cartilage, bone, 3D printing); Electrospraying to produce nanospheres; encapsulation efficiency and release studies of protein encapsulated nanospheres (pg. 433, 436).

L00259 Ragaert K, De Baere I, Moerman M, Cardon L, Degrieck J. Design and thermoregulation of a new microextrusion dispense head for 3D-plotting of thermally sensitive thermoplastics. Polymer Engineering & Science 2013; 53(2):273-282. >>> Poly(L-lactide); IV 0.90-1.20 dL/g; biomaterial (3D printing);

L00090 Khan MS, Fon D, Li X, Tian J, Forsythe J, Garnier G et al. Biosurface engineering through ink jet printing. Colloids and Surfaces B: Biointerfaces 2010; 75(2):441-447. >>> Poly(e-caprolactone); tissue engineering (scaffold, nanofiber); "bioprinting has the capability to become a rapid and accurate process of generating NGF concentration gradient patterns for controlling neuron growth." p. 441; PCL was dissolved in a solvent mixture consisting of chloroform and methanol; proteins were printed on the polymeric scaffolds; electrospinning.

L00127 Radulescu D, Dhar S, Young CM, Taylor DW, Trost HJ, Hayes DJ et al. Tissue engineering scaffolds for nerve regeneration manufactured by ink-jet technology. Materials Science and Engineering C 2007; 27(3):534-539. >>> Poly(DL-lactide); Poly(DL-lactide-co-e-caprolactone); 80:20; 25:75; tissue engineering (scaffold); nerve regeneration; tissue scaffold printing technology.