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(71) Applicant: **CESCO BIOENGINEERING CO., LTD.** [CN/CN]; 1F, No.36, 20th RD., Taichung Industry Park, Taichung, Taiwan (CN).

(72) Inventor: **CHANG, King-Ming**; 1F, No.36, 20th RD., Taichung Industry Park, Taichung, Taiwan (CN).

(74) Agent: **BEIJING SANYOU INTELLECTUAL PROPERTY AGENCY LTD.**; 16th Fl.,Block A,Corporate Square,No.35 Jinrong Street, Beijing 100033 (CN).

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(54) Title: A CARRIER FOR CELL BIOMASS PRODUCTION AND CELL CULTURE DEVICE COMPRISING THE SAME

(57) Abstract: A three-dimensional porous growth surface (carriers) made by multiple layers of netting or mesh, especially large dimension and area of fabrics that are capable to form a column-type fixed bed by rolling the layers or other shape of fixed bed by stacking or randomly disposed packing the carriers to form a packed-bed for cell culture the layers together. A method to enhance the cell growth by consistent pore dimension and structure through the application of nettings or meshes. A method of use for enhancing the cell recovery with limited layer of the netting or meshes that has fewer obstacles than other carriers made by non-woven fabrics, or porous structure materials. A method of sealing the surrounding of the multilayer nettings or meshes to reduce particle generation during cell harvest, or ease of separation by filtration due to larger wall dimension on the nettings or meshes than cells. The fixed bed make by large dimension of the growth surface can easily to manufacture a fixed bed simply by rolling the multiple layers of sheets, which can reduce the manufacture cost and also facilitate mass production of carriers for fixed bed bioreactors.

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