

Supplementary Materials:

Table S1. Conventional protein-based materials and graphene-based material platforms for controlling cellular microenvironments.

Materials	Structure	Target Cells	Purpose	Ref.
Fibronectin, collagen	-	Mouse myoblast cells	Myogenic differentiation	[1]
Collagen, PLA, PDA	Scaffold	Human mesenchymal stem cells	Osteogenic differentiation	[2]
Graphene oxide	Nanofibrous scaffold	Human mesenchymal stem cells	Oligodendrocyte differentiation	[3]
Graphene oxide	Nanofibrous scaffold	Rat pheochromocytoma cells	Neuronal differentiation	[4]
Graphene oxide	Crumpled graphene	Mouse myoblast cells	Myogenic differentiation	[5]
Reduced graphene oxide	Coffee-ring array	Mouse myoblast cells	Myogenic differentiation	[6]
Graphene	Graphene–Au hybrid nanoarray	Human mesenchymal stem cells	Osteoblast differentiation	[7]
Graphene oxide	Vertically coated GO micropattern	Human liver cancer cells	3D cell culture	[8]
Graphene	Nanofibrous scaffold	Human cervical cancer cell	Long-term cell culture	[9]
Graphene oxide	Nanofibrous scaffold	Human breast cancer cell	Induce cell proliferation	[10]

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