

Supporting Information

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Nanotechnology Meets Biology: Peptide-based Methods for the Fabrication of Functional Materials

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(3 pages)

Table S1. Materials-directing peptides discussed in the text

Peptide Name	Sequence	Material	Reference	Reaction Parameters	Shape
Q7	QQSWPIS	Pd	30	Na ₂ PdCl ₄ , H ₂ O, peptide, NaBH ₄ at RT	—
Pd4	TSNAVHPTLRHL	Pd	9, 32, 34, 35	K ₂ PdCl ₄ , H ₂ O, peptide, NaBH ₄ at RT	Spheres
R5	SSKKSGSYSGSKGSKRRIL	Pd	37, 38	K ₂ PdCl ₄ , H ₂ O, peptide, NaBH ₄ at RT	Nanoribbons and Nanoparticle Networks
BP7A	TLHVSSY	Pt	40, 41	H ₂ PtCl ₆ , H ₂ O, peptide, NaBH ₄ and ascorbic acid at RT	Multipods
T7	TLTTLTN	Pt	39, 41	H ₂ PtCl ₆ , H ₂ O, peptide, NaBH ₄ and ascorbic acid at RT	Right Bipyramid, Cube
S7	SSFPQPN	Pt	39, 41	H ₂ PtCl ₆ , H ₂ O, peptide, NaBH ₄ and ascorbic acid at RT	{111}-Bipyramid, Tetrahedron
—	PW _{xx} QRELSV	Pt	42	Pt(NH ₃) ₄ (NO ₃) ₂ or K ₂ PtCl ₄ , H ₂ O or Tris buffer (pH 7), NaBH ₄ at RT	Polyhedra to cubes
E5	CGGEVSALEKEVSALEKEVSA-LEKEVSALEKEVSALEK	Au	14	Purchased Au NP, peptide, H ₂ O at RT	—
FlgA3	DYKDDDDKPAYSSGAPPMPPF	Au	14	Purchased Au NP, peptide, H ₂ O at RT	—
A3	AYSSGAPPMPPF	Au	44-46	HAuCl ₄ , peptide, HEPES (pH 7), TEAA (pH 7), H ₂ O, citrate at RT	Nanoribbons, double helices and hollow spheres
AG4	NPSSLFRYLPSD	Au	47	HAuCl ₄ , peptide, H ₂ O in dark at RT	Hybrid spheres
—	NPSSLFRSLPSD	Au	47	HAuCl ₄ , peptide, H ₂ O in dark at RT	Wire-like with amorphous aggregates
—	NPSSLFRGLPSD	Au	47	HAuCl ₄ , peptide, H ₂ O in dark at RT	Wire-like with amorphous aggregates
—	NPSSLGRYLPSD	Au	47	HAuCl ₄ , peptide, H ₂ O in dark at RT	Wire-like with amorphous aggregates
—	NPSSLGRSLPSD	Au	47	HAuCl ₄ , peptide, H ₂ O in dark at RT	Wire-like with amorphous aggregates
D6	DDDDDD	Ag	15	AgOOCCH ₃ , peptides, yeast cells, H ₂ O at RT	—
E6	EEEEEE	Ag	15	AgOOCCH ₃ , peptides, yeast cells, H ₂ O at RT	—
Ge8	SLKMPHWPHLLP	Ag	10	AgNO ₃ , peptide, HEPES, H ₂ O at RT	Spherical to curved wires
Z1	GLHVMHKVAPPRGGGC	ZnO	53	Zn(NO ₃) ₂ , peptide, HMTA, H ₂ O at RT then 65 °C	Hexagonal platelets
G-12	GLHVMHKVAPPR	ZnO	54	Zn(NO ₃) ₂ , peptide, HMTA, H ₂ O at 20 °C then 65 °C	Rod-like

Peptide Name	Sequence	Material	Reference	Reaction Parameters	Shape
GT-16	GLHVMHKVAPPRGGGC	ZnO	54	Zn(NO ₃) ₂ , peptide, HMTA, H ₂ O at 20 °C then 65 °C	Rod-like
Ti-1	RKKRTKNPTHKLGGGW	TiO ₂	16	TiBALDH, peptide, phosphate-citrate buffer, H ₂ O at RT	Fused networks
Ti-2	MRMIRRFPSLKGGGW	TiO ₂	16	TiBALDH, peptide, phosphate-citrate buffer, H ₂ O at RT	Fused networks
Ti-3	KSLSRHDHIIHHGW	TiO ₂	16	TiBALDH, peptide, phosphate-citrate buffer, H ₂ O at RT	Fused networks
Ti-4	TQHLSHPRYATKGGGW	TiO ₂	16	TiBALDH, peptide, phosphate-citrate buffer, H ₂ O at RT	Fused networks
dTi-1 (H/R)	RKKRTKNPTRKLGGGW	TiO ₂	16	TiBALDH, peptide, phosphate-citrate buffer, H ₂ O at RT	Fused networks
dTi-1 (RKK)	RKKRKKRKKRKKGGGW	TiO ₂	16	TiBALDH, peptide, phosphate-citrate buffer, H ₂ O at RT	Fused networks
Ti(Si)-1	YPSAPPQWLTNT	TiO ₂	55	Silicic acid or TMOS or K ₂ (TiO(C ₂ O ₄) ₂), peptide, phosphate-citrate buffer, H ₂ O at RT	Amorphous
Ti(Si)-4	ATTLHPPRTSLP	TiO ₂	55	Silicic acid or TMOS or K ₂ (TiO(C ₂ O ₄) ₂), peptide, phosphate-citrate buffer, H ₂ O at RT	Amorphous
BT1	HQPANDPSWYTG	BaTiO ₃	17	Ba(OOCCH ₃) ₂ , K ₂ (TiO(C ₂ O ₄) ₂), peptide, H ₂ O at RT	Tetragonal crystals
BT2	NTISGLRYAPHM	BaTiO ₃	17	Ba(OOCCH ₃) ₂ , K ₂ (TiO(C ₂ O ₄) ₂), peptide, H ₂ O at RT	Tetragonal crystals