Journal of Materials Chemistry A

CORRECTION

View Article Online
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Cite this: J. Mater. Chem. A, 2025, 13, 14420

DOI: 10.1039/d5ta90094h

rsc.li/materials-a

Correction: Colloidal synthesis of Au nanomaterials with a controlled morphology and crystal phase *via* the [Au(I)-oleylamine] complex

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Correction for 'Colloidal synthesis of Au nanomaterials with a controlled morphology and crystal phase *via* the [Au(I)-oleylamine] complex' by Gang Wang *et al.*, *J. Mater. Chem. A*, 2021, **9**, 19534–19553, https://doi.org/10.1039/D1TA03666A.

The authors regret that the crystal phase of Au nanowires reported in ref. 55 was not classified correctly in their published Review paper; consequently, minor corrections are required for Section 2, Fig. 1, Table 1, and Section 2.2.2, where ref. 55 was discussed. The details are listed below.

In Section 2 (page 19536), the sentences in the second paragraph "*In 2010, the Au NWs with mixed fcc and hexagonal close-packed (hcp) phases were synthesized by Kura et al.*[55] *Soon after that, Huang et al. made a breakthrough in crystal phase controlled synthesis of Au nanomaterials based on a proposed size effect.*[41,43,56] *They reported the syntheses of 2H Au square sheets (AuSSs)*[41] *and 2H/fcc Au square-like plates (AuSPs)*[56] *in 2011 and 2H/fcc tadpole-shaped Au NWs*[43] *in 2012.*"

should be revised to: "*In 2010, fcc Au NWs with mixed atomic stacks were synthesized by Kura et al.*[55] *Soon after that, Huang et al. made a breakthrough in crystal phase controlled synthesis of Au nanomaterials based on a proposed size effect.*[41,43,56] *They reported the syntheses of hexagonal close-packed (hcp, 2H type) Au square sheets (AuSSs)*[41] *and 2H/fcc Au square-like plates (AuSPs)*[56] *in 2011 and 2H/fcc tadpole-shaped Au NWs*[43] *in 2012.*"

The corrected version of Fig. 1 is displayed below with the caption for 2010 updated:

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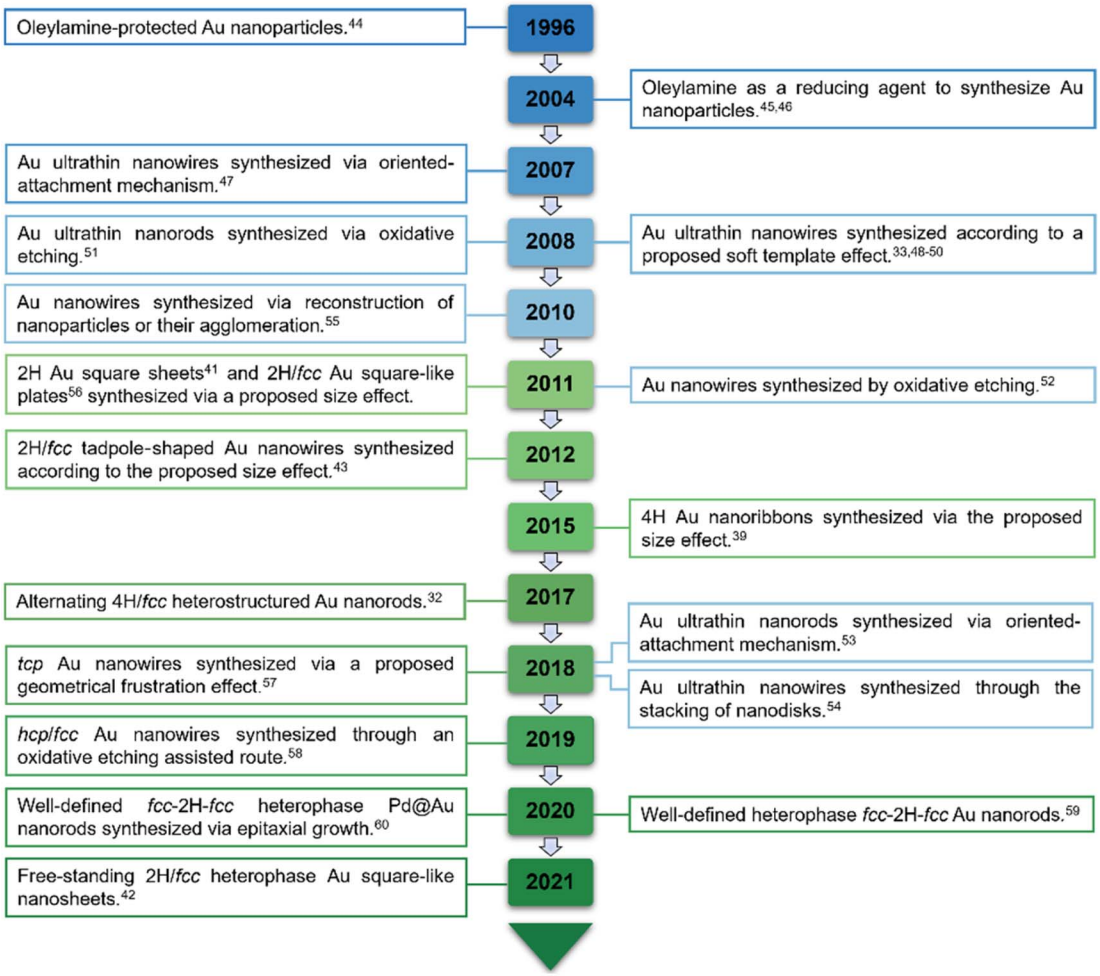

Fig. 1 Timeline showing the development of Au nanomaterials synthesized using the [Au(I)-oleylamine] complex.

In Table 1, in addition to the modified 'Proposed growth mechanism' for ref. 55, one minor correction has also been made to the second to last row in column 'Reactants except oleylamine and Au precursor' to supplement the description of ref. 42.

Table 1 Summary of Au nanomaterials synthesized by [Au(I)-oleylamine] complex

Morphology	Phase	Reactants except oleylamine and Au precursor	Temperature and time	Proposed growth mechanism	Ref.
Nanoparticle	fcc	Water/toluene	RT,[a] ~12 h	—	44
	—	Toluene	110 °C, 2 h	—	45
	fcc	Water	80 °C, —	Decomposition of [Au-oleylamine] complex	46
	fcc	Water	80 °C, 3 h	Decomposition of [Au-oleylamine] complex	62
	—	Chloroform	60 °C, 24 h	Decomposition of [Au-oleylamine] complex	63
	fcc	Toluene	65 °C, 6 h	—	65
	fcc	4-*tert*-Butyl toluene/1,2-hexadecanediol	200 °C, 1.5 h	—	66
	fcc	Oleic acid	Microwave, 1 min	—	38
Nanowire	—	Oleic acid/toluene/ascorbic acid	Step 1: 120 °C, step 2: RT, step 3: RT, several hours to a few days	Oriented-attachment mechanism	47
	—	—	RT, 4 days	Micellar formation mechanism	33
	—	Hexane/Ag nanoparticles	60 °C, 24–100 h	Micellar formation mechanism	48
	fcc	Route 1: oleic acid/hexane Route 2: hexane	80 °C, ~5 h	Micellar formation mechanism	49

Table 1 (*Contd.*)

Morphology	Phase	Reactants except oleylamine and Au precursor	Temperature and time	Proposed growth mechanism	Ref.
	fcc	Chloroform	Step1: RT, 24 h	Micellar formation mechanism	50
	fcc	Hexane/TIPS[b]	Step2: 35–40 °C, several days	RT, 4–5 h	
	Oriented-	attachment mechanism	67		
	—	Chloroform/CO	60 °C, 10 min	—	68
	fcc	Hexane/O_2	Step 1: RT, 24 h Step 2: 80 °C, 6 h	Etching mechanism	52
	fcc	—	80 °C, 24 h	Micellar formation mechanism	69
	—	—	75 °C, 5–6 h	—	71
	—	Hexane/TIPS	40 °C, 24 h	Micellar formation mechanism	72
	—	Route 1: hexane	Route 1 – step 1: 25 °C, 48 h; step 2: 45 °C, 48 h	Micellar formation mechanism	73
		Route 2: hexane/TIPS	Route 2 – 40 °C, 3 h		
	—	Hexane/TIPS	RT, 12 h	Disk stacking mechanism	54
	2H/fcc	Hexane/graphene oxide sheets	55 °C, 36 h	Size effect	43
	2H/fcc	Hexane/graphene oxide sheets	Step 1: 55 °C, 10 h Step 2: RT, 2 days	Size effect	
	fcc	—	Step 1: 60 °C, step 2: 85 °C, 2 h	Reconstruction of nanoparticles or their agglomeration/stacking fault	55
	hcp/fcc	—	65 °C, 72 h	Stacking fault	94
	hcp/fcc	$CuCl_2$	160 °C, 4 min	Oxidative etching	58
tcp	Hexane/ TIPS	RT, ~5 h	Geometrical frustration effect	57	
Nanorod	fcc	Chloroform/amorphous Fe nanoparticles	RT, 6–8 days	Etching mechanism	51
	—	Cyclohexane/TIPS	Step 1: RT, 2 h Step 2: RT, 6–30 h	—	75
	—	Cyclohexane/TIPS	Step 1: RT, 2 h Step 2: RT, 30 h	Oriented attachment mechanism	53
	4H/fcc	—	70 °C, 17 h	Size effect/stacking fault	32
	fcc-2H-fcc	*n*-Dodecylamine/O_2	65 °C, 17 h	Oxidative etching	59
	fcc-2H-fcc	Hexane/2H-Pd nanoparticles	60 °C, 12 h	Epitaxial growth	60
Nanosheet	2H	Hexane/ethanol/graphene oxide sheets	55 °C, 16 h	Size effect	41
	2H/fcc	Hexane/ethanol/graphene oxide sheets	55 °C, 28 h	Size effect	
	2H/fcc	Hexane/ethanol/graphene oxide sheets	Step 1: 58 °C, 14 h Step 2: 58 °C, 10 h	Size effect	56
	2H/fcc	Hexane/squalene/1,2-dichlorobutane/4-*tert*-butylpyridine	58 °C, 17 h	Size effect	42
Nanoribbon	4H	Hexane/1,2-dichloropropane	58 °C, 16 h	Size effect	39

[a] RT: room temperature. [b] TIPS: triisopropylsilane.

Lastly, in Section 2.2.2 (page 19544), the sentences in the second paragraph "*In 2010, Kura et al. synthesized Au NWs with mixed fcc and hcp phases by reducing $HAuCl_4$ in oleylamine.[55] They proposed that the Au NWs were generated by the restructuring of nanoparticles or agglomerates formed from the R-NH_2ClAu^+ intermediates. The HRTEM image taken from the ⟨110⟩ direction showed that the atomic stacking sequence changed from "ABCA" to "ACBC" and "ABAB" in some segments. The occurrence of intrinsic and extrinsic stacking faults during the Au NW growth process may cause the formation of hcp segments in the Au NWs.*"

should be revised to: "*In 2010, Kura et al. synthesized Au NWs with mixed atomic stacks by reducing $HAuCl_4$ in oleylamine.[55] They proposed that the Au NWs were generated by the restructuring of nanoparticles or agglomerates formed from the R-NH_2ClAu^+ intermediates. The HRTEM image taken from the ⟨110⟩ direction showed that the atomic stacking sequence changed from "ABCA" to "ACBC" and "ABAB" in some segments. The occurrence of intrinsic and extrinsic stacking faults during the Au NW growth process may cause the formation of mixed atomic stacks in the fcc Au NWs.*"

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

