



Cite this: *Nanoscale*, 2021, **13**, 11299

## Correction: Exploring the 3D structure and defects of a self-assembled gold mesocrystal by coherent X-ray diffraction imaging

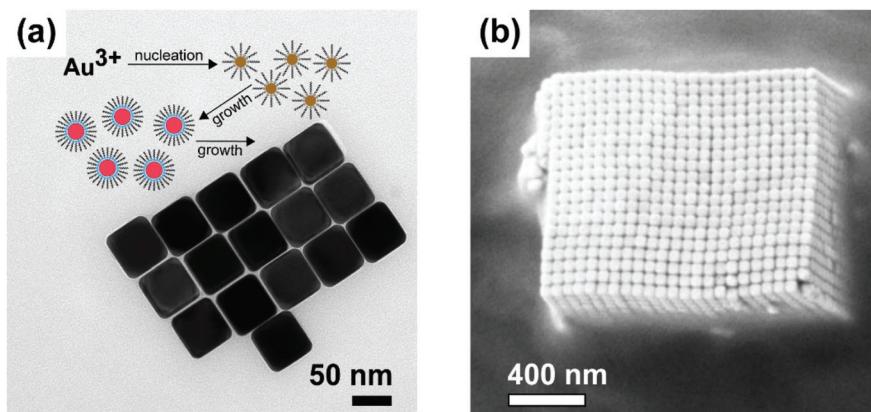
Jerome Carnis,<sup>a</sup> Felizitas Kirner,<sup>b</sup> Dmitry Lapkin,<sup>a</sup> Sebastian Sturm,<sup>c</sup> Young Yong Kim,<sup>a</sup> Igor A. Baburin,<sup>d</sup> Ruslan Khubbudinov,<sup>a,e</sup> Alexandr Ignatenko,<sup>a</sup> Ekaterina Iashina,<sup>f</sup> Alexander Mistonov,<sup>f</sup> Tristan Steegemans,<sup>b</sup> Thomas Wieck,<sup>c</sup> Thomas Gemming,<sup>c</sup> Axel Lubk,<sup>c</sup> Sergey Lazarev,<sup>a,g</sup> Michael Sprung,<sup>a</sup> Ivan A. Vartanyants<sup>\*a,e</sup> and Elena V. Sturm<sup>\*b</sup>

DOI: 10.1039/d1nr90126e

rsc.li/nanoscale

Correction for 'Exploring the 3D structure and defects of a self-assembled gold mesocrystal by coherent X-ray diffraction imaging' by Jerome Carnis *et al.*, *Nanoscale*, 2021, DOI: 10.1039/D1NR01806J.

The authors regret that the original article contained some errors in the main text and in the captions of Fig. 1 and 3. In section 4.3 of the original article, the sentence "The polymer tip was fixed on a rotation stage around the vertical axis  $z$ ." should read "The polymer tip was fixed on a rotation stage around the vertical axis.". Fig. 1 and 3 are displayed below with the updated captions.



**Fig. 1** Synthesis of gold nanoparticles and mesocrystals. (a) TEM image of gold nanocubes stabilized by CTAC and synthesized using a seed-mediated approach. (b) SEM image of the self-assembled gold mesocrystal prior to FIB preparation for the CXDI measurements.

<sup>a</sup>Deutsches Elektronen-Synchrotron DESY, Notkestrasse 85, D-22607 Hamburg, Germany. E-mail: ivan.vartanyants@desy.de

<sup>b</sup>University of Konstanz, Universitätsstraße 10, 78457 Konstanz, Germany. E-mail: elena.sturm@uni-konstanz.de

<sup>c</sup>Leibniz Institute for Solid State and Materials Research, Helmholtzstraße 20, 01069 Dresden, Germany

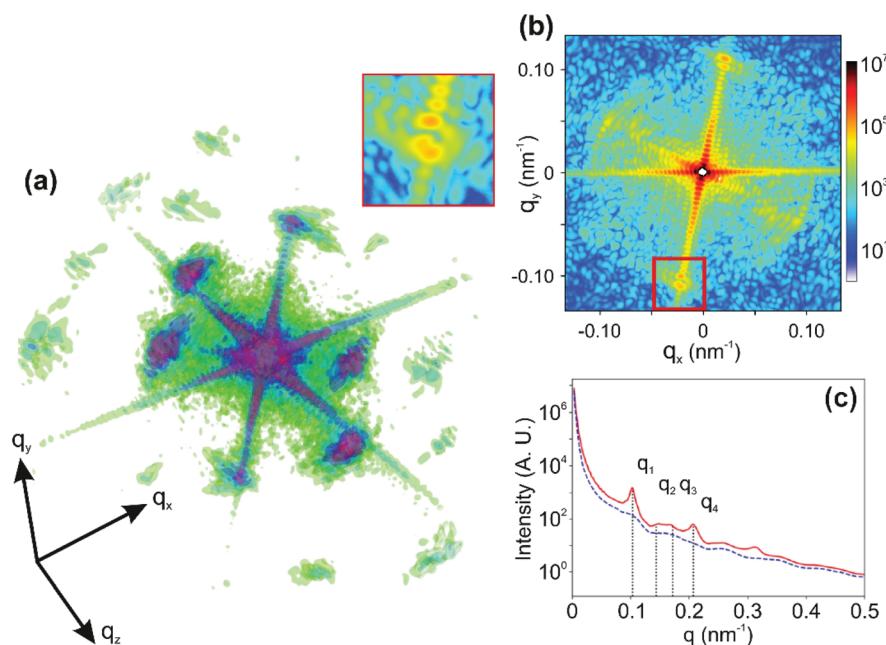
<sup>d</sup>TU Dresden, Bergstraße 66b, 01062 Dresden, Germany

<sup>e</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Kashirskoe shosse 31, 115409 Moscow, Russia

<sup>f</sup>Saint-Petersburg State University, University Embankment 7/9, 199034 St Petersburg, Russia

<sup>g</sup>National Research Tomsk Polytechnic University (TPU), pr. Lenina 30, 634050 Tomsk, Russia





**Fig. 3** Diffraction patterns measured in the CXDI experiment. (a) Isosurface view (from 54% to 72% level) of the 3D diffraction pattern from the mesocrystalline grain shown in SEM image in the inset of Fig. 2. The data has been gridded onto the orthonormal laboratory frame. The length of coordinate arrows corresponds to  $0.1 \text{ nm}^{-1}$ . (b) Slice at the center of the interpolated diffraction pattern in the  $q_xq_y$  plane, showing the low-angle scattering region up to the first superlattice Bragg peaks. An enlarged view of the area outlined by a red box is shown in panel (a). (c) Intensity distribution as a function of the momentum transfer value  $q$  obtained by angular averaging of the 3D diffraction pattern (red line). The blue dashed line corresponds to the median value at momentum transfer  $q$  determined from the angular averaged values. The AXCCA was performed on the data obtained by subtracting these median values from the 3D diffraction pattern shown in (a). The vertical dotted lines correspond to the momentum transfer values used in the AXCCA:  $q_1 = 0.104 \text{ nm}^{-1}$ ,  $q_2 = 0.144 \text{ nm}^{-1}$ ,  $q_3 = 0.172 \text{ nm}^{-1}$ , and  $q_4 = 0.208 \text{ nm}^{-1}$ . Note, that intensities in all panels are given in logarithmic scale.

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

