

## CORRECTION

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# Correction: PEGylated gold nanoparticles: polymer quantification as a function of PEG lengths and nanoparticle dimensions

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 Correction for 'PEGylated gold nanoparticles: polymer quantification as a function of PEG lengths and nanoparticle dimensions' by Kamil Rahme *et al.*, *RSC Adv.*, 2013, 3, 6085–6094.

The authors regret that the surface area calculation of the grafting density was originally calculated using  $\pi r^2$  instead of  $4\pi r^2$ . This error does not affect the overall conclusions of this paper. Furthermore, the correct surface area was used in the calculation of the polymer conformation. The corrected grafting densities and foot prints have been included below.

In the abstract, the decrease in grafting density of the mPEG-SH ligands should read "0.983 to 0.07 PEG per nm<sup>2</sup>" and the decrease in grafting density of the mPEG<sub>10 000</sub>-SH should read "0.393 to 0.2 PEG per nm<sup>2</sup>".

The data in Table 2 should read:

Table 2. Surface coverage (from TGA) and mPEG-SH layer thickness (from DLS size distribution by volume) on 15 nm gold nanoparticles

mPEG-SH ( $M_w$ )	Number of EO	DLS ( $\nu$ )/PEG layer (nm)	Weight loss (%) $T > 320$ °C	$N_{\text{PEG}}$ per 15 nm AuNP	Foot print (nm <sup>2</sup> )	Grafting density per nm <sup>2</sup>
2100	47	$2.83 \pm 0.66$	6.7	$695 \pm 87$	1.02	0.983
5400	122	$7.79 \pm 1.0$	9.9	$424 \pm 53$	1.67	0.6
10 800	245	$12.77 \pm 1.5$	12	$278 \pm 42$	2.54	0.393
19 500	443	$21.61 \pm 2.5$	10.82	$132 \pm 16.5$	5.35	0.187
29 500	670	$25.6 \pm 3.0$	10	$81 \pm 10$	8.77	0.114
51 400	1168	$37.15 \pm 4.0$	10.85	$50 \pm 6$	14.2	0.07

The data in Table 3 should read:

Table 3. Surface coverage (from TGA) of different AuNPs diameter (EM/DLS) coated with mPEG<sub>10 000</sub>-SH

Diameter (nm)/EM	Diameter (nm)/DLS ( $\bar{I}$ )	Weight loss (%) $T > 320$ °C	$N_{\text{PEG}}$ /AuNP	Foot print (nm <sup>2</sup> )	Grafting density per nm <sup>2</sup>
$15 \pm 1.8$	$59 \pm 3.5$	14.25	$278 \pm 42$	2.54	0.393
$30 \pm 3.5$	$72 \pm 5$	5.7	$916 \pm 106$	3.12	0.323
$62.5 \pm 6$	$102 \pm 9$	1.64	$2572 \pm 402$	5	0.2
$93 \pm 12$	$138 \pm 10$	1.41	$6778 \pm 814$	4.2	0.24
$115 \pm 10$	$165 \pm 14$	1.449	$12\ 960 \pm 1227$	3.2	0.312

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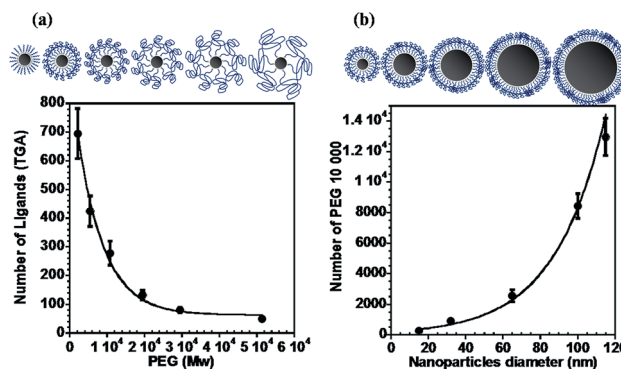
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Fig. 5 should be replaced by the following figure:



The text also affects the discussion of Fig. 5 on page 6091 which should read:

“Specifically, the number of PEG molecules grafted to the Au nanoparticles decreased by  $\sim 12$  fold from  $695 \pm 87$  for mPEG<sub>2000</sub>-SH ( $0.983$  PEG per nm<sup>2</sup>) to  $50 \pm 6$  for mPEG<sub>48 500</sub>-SH ( $0.07$  PEG per nm<sup>2</sup>). The solid line is an exponential fit to the data. Increased conformational entropy of the PEG molecules with polymer chain length leads to an increase in the footprint of the PEG molecules at the Au nanoparticle surface from  $1.02$  nm<sup>2</sup> for mPEG<sub>2000</sub>-SH to  $14.2$  nm<sup>2</sup> for mPEG<sub>48 500</sub>-SH (see Table 2)

The text discussing mPEG<sub>10 000</sub>-SH on the same page also requires amendment:

Finally, some similar behaviour has been observed in this work where the grafting density of mPEG<sub>10 000</sub>-SH was higher on  $15$  nm diameter Au nanoparticles and decreased slightly from  $0.393$  to  $0.2$  PEG per nm<sup>2</sup> when the particle size increased to  $65$  nm in diameter (Table 3).”

The last three lines on page 3 of the ESI should read:

“So from this experiment we estimate that  $15$  nm AuNPs contain  $278$  PEG<sub>10 000</sub>-SH. The grafting density correspond to  $278/706.84 \sim 0.393$  PEG<sub>10 000</sub> per nm<sup>2</sup> and finally the foot print of the PEG<sub>10 000</sub> correspond to  $1/0.393 \sim 2.54$  nm<sup>2</sup>.”

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

