

SCIENTIFIC REPORTS

Corrigendum: Epidermal growth factor receptor subunit locations determined in hydrated cells with environmental scanning electron microscopy

Diana B. Peckys, Jean-Pierre Baudoin, Magdalena Eder, Ulf Werner & Niels de Jonge

Scientific Reports 3: 2626; doi: 10.1038/srep02626; published online 11 September 2013; updated on 03 August 2015

The authors made a mistake in the calculations in transferring from an electron dose in electrons per square Angstrom to electrons per square nanometer.

In the ‘ESEM imaging of hydrated A549 and COS7 cells’ section,

“The total dose for this series was $1.9 e^-/\text{nm}^2$, only a factor of two larger than that used for cryo TEM studies of cells⁵. The effect of radiation damage was evaluated in a control experiment (Supplementary Fig. S4). Minor sample shrinkage (<1%) was observed but the AuNP distances in the relevant range of up to 300 nm were not influenced by electron beam irradiation for a dose of up to $7.5 e^-/\text{nm}^2$.”

should read:

“The maximal electron dose for the micrographs of Fig. 2 was $1.5 \times 10^2 e^-/\text{\AA}^2$, only a factor of 1.5 larger than that used for cryo-tomography studies of cells⁵. The effect of radiation damage was evaluated in a control experiment (Supplementary Fig. S4). Minor sample shrinkage (<1%) was observed but the AuNP distances were not influenced by electron beam irradiation for a dose of up to $4.3 \times 10^2 e^-/\text{\AA}^2$.”

In the legend of Figure 2,

“(c) Image showing individual Au-NPs as white spots for the region shown as rectangle in b, $s = 2.7 \text{ nm}$ and $M = 50,000\times$.”

should read:

“(c) Image showing individual Au-NPs as white spots for the region shown as rectangle in b, pixel dwell time = $30 \mu\text{s}$, $s = 2.7 \text{ nm}$ and $M = 50,000\times$.”

In the ‘Electron dose calculation’ section in the Methods,

“...to the maximal electron dose used in this study of $q = 4.9 e^-/\text{nm}^2$,...”

should read:

“...to the maximal electron dose used in this study of $q = 5.1 \times 10^2 \text{ e}^-/\text{\AA}^2$,...”

On page 5 of the Supplementary Information,

“...EGFRs were imaged twice at a range of electron doses distributed between 0.5 and $7.5 \text{ e}^-/\text{nm}^2$ in total for the image pair.”

should read:

“...EGFRs were imaged twice at a range of electron doses distributed between 28 and $4.3 \times 10^2 \text{ e}^-/\text{\AA}^2$ per image.”

On page 5 of the Supplementary Information,

“Since the dose limit⁴ used for cryo TEM studies of cells amounts to $\sim 1 \text{ e}^-/\text{nm}^2$,”

should read:

“Since the dose limit⁴ used for cryo-tomography studies of cells amounts to $\sim 100 \text{ e}^-/\text{\AA}^2$,”

On page 5 of the Supplementary Information,

“To verify that radiation damage did not significantly influence the measured dimer distances, we recorded image pairs in 12 regions of 4 cells, with 10 different electron doses between 0.5 and $7.5 \text{ e}^-/\text{nm}^2$ total for the image pair.”

should read:

“To verify that radiation damage did not significantly influence the measured dimer distances, we further analyzed the image pairs.”

On page 6 of the Supplementary Information,

“A total of 37 distances was measured in three image pairs with doses of 0.5, 3.6, and $7.5 \text{ e}^-/\text{nm}^2$,...”

should read:

“A total of 37 distances was measured in four image pairs with doses around $70 \times 10^2 \text{ e}^-/\text{\AA}^2$ per image, ...”

In the legend of Supplementary Fig S4,

“The image pair was recorded with a total dose of $4.2 \text{ e}^-/\text{nm}^2$. The magnification was $44,000\times$, and the pixel dwell time was $50 \mu\text{s}$. ”

should read:

“The image pair was recorded with a dose of $2.2 \times 10^2 \text{ e}^-/\text{\AA}^2$ per image. The magnification was $46,549\times$, the pixel size was 2.9 nm , and the pixel dwell time was $50 \mu\text{s}$.”