Eur. Phys. J. Appl. Phys. **50**, 21601 (2010)
DOI: 10.1051/epjap/2010046

THE EUROPEAN PHYSICAL JOURNAL APPLIED PHYSICS

Erratum

Fluid modeling of a microwave micro-plasma at atmospheric pressure

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Received: 28 February 2010 / Accepted: 5 March 2010
Published online: 31 March 2010 –

Abstract. This is an erratum to *Eur. Phys. J. Appl. Phys.* **49**, 13102 (2010), DOI: 10.1051/epjap/2009180.

An error occurred in the presentation of the following equations.

Equation (7) and its description, on page 13102-p2 of the original article, should read

$$\frac{1}{2}n_e\mu_e\left|\widetilde{E}_{\rm hf}\right|^2 = \Gamma_e E_{\rm dc} + \frac{d\Gamma_\varepsilon}{dy} + n_e\Theta_{\rm coll} + n_e\sum_{r=5}^{7}\Theta_{{\rm kin},r} \quad (7)$$

[...]

Here, $\Theta_{\rm coll}$ is the power lost per electron due to elastic, inelastic, and superelastic electron-neutral collisions (thus, including also reactions 1–3 in Tab. 1); $\Theta_{{\rm kin},r}$ is the power lost per electron due to all other collisions between electrons and heavy particles (reactions 5–7 in Tab. 1); [...] the terms on the right-hand side of equation (7) represent [...]; and (iii) the power lost in collisions between electrons and heavy particles (for the last two terms).

Equation (9) and its description, on pages 13102-p2 and 13102-p3 of the original article, should read

$$-\frac{d}{dy}\left(\lambda_T\frac{dT_g}{dy}\right) = n_e\Theta_{\rm el} + \left(\sum_p \Gamma_p\right)E_{\rm dc} + n_e\sum_{r=5}^{7}\Theta_{{\rm kin},r} - \sum_h S_{{\rm kin},h}\varepsilon_h. \quad (9)$$

Here, [...] $S_{{\rm kin},h}$ is the net production rate of heavy species $h = {\rm Ar}^+, {\rm Ar}_2^+, {\rm Ar(4s)}$, with excitation energy ε_h, due to the kinetic reactions 4–8 (see Tab. 1). [...] the terms on the right-hand side of equation (9) represent [...] (iii) the energy transferred from electrons to the gas via the kinetic reactions 5–7 (see Tab. 1); and (iv) the energy transferred to the gas potential energy, after production of heavy species h via the kinetic reactions 4–8 (see Tab. 1).

The authors apologise for these errors.

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