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CORRECTION

Correction to: A Model for Lubricant Transfer from Media to Head During Heat-Assisted Magnetic Recording (HAMR) Writing

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The original version of this article unfortunately contained an error in the following equations. The corrected equation (1) is given below:

$$\frac{\partial h_\mathrm{d}}{\partial t} + u_\mathrm{d}\frac{\partial h_\mathrm{d}}{\partial x} + \frac{\partial}{\partial x}\left[-\frac{h_\mathrm{d}^3}{3\mu_\mathrm{d}}\frac{\partial p_\mathrm{d}}{\partial x} + \frac{h_\mathrm{d}^2}{2\mu_\mathrm{d}}\tau_{x,\mathrm{d}}\right] + \frac{\partial}{\partial y}\left[-\frac{h_\mathrm{d}^3}{3\mu_\mathrm{d}}\frac{\partial p_\mathrm{d}}{\partial y} + \frac{h_\mathrm{d}^2}{2\mu_\mathrm{d}}\tau_{y,\mathrm{d}}\right] + \frac{\dot{m}_\mathrm{d}}{\rho} = 0 \tag{1}$$

The corrected equations from Section 2.1 are:

$$p_\mathrm{lap}\boldsymbol{n} = (-\gamma\nabla\cdot\boldsymbol{n})\boldsymbol{n} = (\gamma\nabla^2 h)\boldsymbol{n}$$
$$\boldsymbol{\tau} = \nabla\gamma - (\nabla\gamma\cdot\boldsymbol{n})\boldsymbol{n}$$

The corrected terms in equations (9), (10) and the corrected equations (11), (12) are given below:

$$\mu_\mathrm{d}^* = \mu_0\mu_\mathrm{d} \tag{9}$$

$$S \equiv \frac{2\mu_0 L^2\dot{m}_\mathrm{d}}{h_{0,\mathrm{d}}^2 c\Delta T_\mathrm{d}\rho} \tag{10}$$

$$\frac{\partial h_\mathrm{d}}{\partial t} + C_u\frac{\partial h_\mathrm{d}}{\partial x} + \frac{\partial}{\partial x}\left[\frac{h_\mathrm{d}^3}{\mu_\mathrm{d}}\frac{\partial \pi_\mathrm{d}}{\partial x} - \frac{h_\mathrm{d}^2}{\mu_\mathrm{d}}\frac{\partial T_\mathrm{d}}{\partial x}\right] + \frac{\partial}{\partial y}\left[\frac{h_\mathrm{d}^3}{\mu_\mathrm{d}}\frac{\partial \pi_\mathrm{d}}{\partial y} - \frac{h_\mathrm{d}^2}{\mu_\mathrm{d}}\frac{\partial T_\mathrm{d}}{\partial y}\right] + S_\mathrm{d} = 0 \tag{11}$$

$$\frac{\partial h_\mathrm{s}}{\partial t} + \frac{\partial}{\partial x}\left[\frac{h_\mathrm{s}^3}{\mu_\mathrm{s}}\frac{\partial \pi_\mathrm{s}}{\partial x} - \frac{h_\mathrm{s}^2}{\mu_\mathrm{s}}\frac{\partial T_\mathrm{s}}{\partial x}\right] + \frac{\partial}{\partial y}\left[\frac{h_\mathrm{s}^3}{\mu_\mathrm{s}}\frac{\partial \pi_\mathrm{s}}{\partial y} - \frac{h_\mathrm{s}^2}{\mu_\mathrm{s}}\frac{\partial T_\mathrm{s}}{\partial y}\right] + S_\mathrm{s} = 0 \tag{12}$$

These correct equations were used in all calculations in the original paper, so none of the numerical simulations or conclusions based on them need to be changed.

The original article can be found online at https://doi.org/10.1007/s11249-017-0952-3.

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