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Preparation of Papers for *IEEE Sensors Letters* (Revised November 2016)

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Received 1 Nov 2016, revised 25 Nov 2016, accepted 30 Nov 2016, published 5 Dec 2016, current version 15 Dec 2016. (Dates will be inserted by IEEE; “published” is the date the accepted preprint is posted on IEEE Xplore®; “current version” is the date the typeset version is posted on Xplore®).

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Table 1. Units for magnetic properties.

|  |  |  |
| --- | --- | --- |
| Symbol | Quantity a | Conversion from Gaussian and cgs emu to SI b |
| *Φ* | magnetic flux | 1 Mx → 10−8 Wb = 10−8 V·s |
| *B* | magnetic flux density,  magnetic induction | 1 G → 10−4 T = 10−4 Wb/m2 |
| *H* | magnetic field strength | 1 Oe → 103/(4π) A/m |
| *m* | magnetic moment | 1 erg/G = 1 emu  → 10−3 A·m2 = 10−3 J/T |
| *M* | magnetization | 1 erg/(G·cm3) = 1 emu/cm3  → 103 A/m |
| 4π*M* | magnetization | 1 G → 103/(4π) A/m |
| *σ* | specific magnetization | 1 erg/(G·g) = 1 emu/g  → 1 A·m2/kg |
| *j* | magnetic dipole moment | 1 erg/G = 1 emu  → 4π × 10−10 Wb·m |
| *J* | magnetic polarization | 1 erg/(G·cm3) = 1 emu/cm3  → 4π × 10−4 T |
| *χρ* | specific susceptibility | 1 cm3/g → 4π × 10−3 m3/kg |
| *μ* | permeability | 1 → 4π × 10−7 H/m  = 4π × 10−7 Wb/(A·m) |
| *μr* | relative permeability | *μ* → *μ*r |
| *w, W* | energy density | 1 erg/cm3 → 10−1 J/m3 |

a No vertical lines in table.

b Gaussian units are the same as cgs emu for magnetostatics; Mx = Maxwell, G = Gauss, Oe = Oersted, Wb = Weber, V = Volt, s = second, T = Tesla, m = meter, A = Ampere, J = Joule, kg = kilogram, H = Henry.

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