Preparation of Papers for <u>IEET JOURNAL</u>

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Abstract: (The abstract should not exceed 250 words. It should briefly summarize the essence of the paper and address the following areas without using specific subsection titles.): Objective: Briefly state the problem or issue addressed, in language accessible to a general scientific audience. Technology or Method: Briefly summarize the technological innovation or method used to address the problem. Results: Provide a brief summary of the results and findings. Conclusions: Give brief concluding remarks on your outcomes. Clinical Impact: Comment on the translational aspect of the work presented in the paper and its potential clinical impact. Detailed discussion of these aspects should be provided in the main body of the paper.

(Note that the organization of the body of the paper is at the authors' discretion; the only required sections are Introduction, Methods and Procedures, Results, Conclusion, and References. Acknowledgements and Appendices are encouraged but optional.)

Index Terms—At least four keywords or phrases in alphabetical order, separated by commas.

Note: There should no nonstandard abbreviations, acknowledgments of support, references or footnotes in in the abstract. This format is adjusted from IEEE format.

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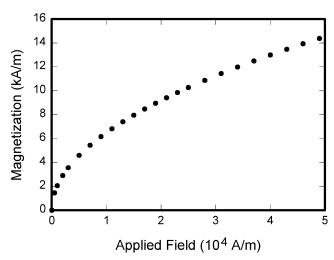


Fig. 1. Magnetization as a function of applied field. Note that "Fig." is abbreviated. There is a period after the figure number, followed by two spaces. It is good practice to explain the significance of the figure in the caption.

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TABLE I Units for Magnetic Properties

Symbol	Quantity	Conversion from Gaussian and CGS EMU to SI ^a
Φ	magnetic flux	$1 \text{ Mx} \rightarrow 10^{-8} \text{ Wb} = 10^{-8} \text{ V} \cdot \text{s}$
В	magnetic flux density, magnetic induction	$1 \text{ G} \rightarrow 10^{-4} \text{ T} = 10^{-4} \text{ Wb/m}^2$
H	magnetic field strength	1 Oe $\to 10^3/(4\pi)$ A/m
m	magnetic moment	1 erg/G = 1 emu
		$\rightarrow 10^{-3} \text{ A} \cdot \text{m}^2 = 10^{-3} \text{ J/T}$
M	magnetization	$1 \text{ erg/(G} \cdot \text{cm}^3) = 1 \text{ emu/cm}^3$ $\rightarrow 10^3 \text{ A/m}$
$4\pi M$	magnetization	1 G \rightarrow 10 ³ /(4 π) A/m
σ	specific magnetization	$1 \text{ erg/}(G \cdot g) = 1 \text{ emu/g} \rightarrow 1 \text{ A} \cdot \text{m}^2/\text{kg}$
j	magnetic dipole	1 erg/G = 1 emu
7	moment	$\rightarrow 4\pi \times 10^{-10} \text{ Wb·m}$
J	magnetic polarization	$1 \text{ erg/(G} \cdot \text{cm}^3) = 1 \text{ emu/cm}^3$ $\rightarrow 4\pi \times 10^{-4} \text{ T}$
χ, κ	susceptibility	$1 \rightarrow 4\pi$
χρ	mass susceptibility	$1 \text{ cm}^3/\text{g} \to 4\pi \times 10^{-3} \text{ m}^3/\text{kg}$
μ	permeability	$1 \rightarrow 4\pi \times 10^{-7} \text{ H/m}$
•	•	$=4\pi\times10^{-7} \text{ Wb/(A·m)}$
$\mu_{\rm r}$	relative permeability	$\mu o \mu_r$
w, W	energy density	$1 \text{ erg/cm}^3 \rightarrow 10^{-1} \text{ J/m}^3$
N, D	demagnetizing factor	$1 \to 1/(4\pi)$

Vertical lines are optional in tables. Statements that serve as captions for the entire table do not need footnote letters.

^aGaussian units are the same as cgs emu for magnetostatics; Mx = maxwell, G = gauss, Oe = oersted; Wb = weber, V = volt, Se = second, Se = tesla, Se = t

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IV. UNITS

Use either SI (MKS) or CGS as primary units. (SI units are strongly encouraged.) English units may be used as secondary units (in parentheses). **This applies to papers in data storage.** For example, write "15 Gb/cm² (100 Gb/in²)." An exception is when English units are used as identifiers in trade, such as "3½-in disk drive." Avoid combining SI and CGS units, such as current in amperes and magnetic field in oersteds. This often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity in an equation.

The SI unit for magnetic field strength H is A/m. However, if you wish to use units of T, either refer to magnetic flux density B or magnetic field strength symbolized as μ_0H . Use the center dot to separate compound units, e.g., "A·m²."

V. HELPFUL HINTS

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Figure axis labels are often a source of confusion. Use words rather than symbols. As an example, write the quantity "Magnetization," or "Magnetization *M*," not just "*M*." Put units in parentheses. Do not label axes only with units. As in Fig. 1, for example, write "Magnetization (A/m)". Do not label axes with a ratio of quantities and units. For example, write "Temperature (K)," not "Temperature/K."

Multipliers can be especially confusing. Write "Magnetization (kA/m)" or "Magnetization (10^3 A/m)." Do not write "Magnetization (A/m) × 1000" because the reader would not know whether the top axis label in Fig. 1 meant 16000 A/m or 0.016 A/m. Figure labels should be legible, approximately 8 to 12 point type.

B. References

Number citations consecutively in square brackets [1]. The sentence punctuation follows the brackets [2]. Multiple references [2], [3] are each numbered with separate brackets [1]–[3]. When citing a section in a book, please give the relevant page numbers [2]. In sentences, refer simply to the reference number, as in [3]. Do not use "Ref. [3]" or "reference [3]" except at the beginning of a sentence: "Reference [3] shows" Please do not use automatic endnotes in *Word*, rather, type the reference list at the end of the paper using the "References" style.

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Define abbreviations and acronyms the first time they are used in the text, even after they have already been defined in the abstract.

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Be sure that the symbols in your equation have been defined before the equation appears or immediately following. Italicize symbols (T might refer to temperature, but T is the unit tesla). Refer to "(1)," not "Eq. (1)" or "equation (1)," except at the beginning of a sentence: "Equation (1) is"

E. Other Recommendations

Use one space after periods and colons. Hyphenate complex modifiers: "zero-field-cooled magnetization." Avoid dangling participles, such as, "Using (1), the potential was calculated." [It is not clear who or what used (1).] Write instead, "The potential was calculated by using (1)," or "Using (1), we calculated the potential."

Use a zero before decimal points: "0.25," not ".25." Use "cm³," not "cc." Indicate sample dimensions as "0.1 cm \times 0.2 cm," not "0.1 \times 0.2 cm²." The abbreviation for "seconds" is "s," not "sec." Do not mix complete spellings and abbreviations of units: use "Wb/m²" or "webers per square meter," not "webers/m²." When expressing a range of values, write "7 to 9" or "7-9," not "7 \sim 9."

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The word "data" is plural, not singular. The subscript for the permeability of vacuum μ_0 is zero, not a lowercase letter "o." The term for residual magnetization is "remanence"; the adjective is "remanent"; do not write "remnance" or "remnant." Use the word "micrometer" instead of "micron." A graph within a graph is an "inset," not an "insert." The word "alternatively" is preferred to the word "alternately" (unless you really mean something that alternates). Use the word "whereas" instead of "while" (unless you are referring to simultaneous events). Do not use the word "essentially" to mean "approximately" or "effectively." Do not use the word "issue" as a euphemism for "problem." When compositions are not specified, separate chemical symbols by en-dashes; for example, "NiMn" indicates the intermetallic compound Ni_{0.5}Mn_{0.5} whereas "Ni–Mn" indicates an alloy of some composition Ni_xMn_{1-x}.

Be aware of the different meanings of the homophones "affect" (usually a verb) and "effect" (usually a noun), "complement" and "compliment," "discreet" and "discrete," "principal" (e.g., "principal investigator") and "principle" (e.g., "principle of measurement"). Do not confuse "imply" and "infer."

Prefixes such as "non," "sub," "micro," "multi," and "ultra" are not independent words; they should be joined to the words they modify, usually without a hyphen. There is no period after the "et" in the Latin abbreviation "et al." (it is also italicized). The abbreviation "i.e.," means "that is," and the abbreviation "e.g.," means "for example" (these abbreviations are not italicized).

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IX. CONCLUSION

Please include a brief summary of the possible clinical implications of your work in the conclusion section. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. Consider elaborating on the translational importance of the work or suggest applications and extensions.

ACKNOWLEDGMENT

The preferred spelling of the word "acknowledgment" in English. Avoid expressions such as "One of us (S.B.A.) would like to thank" Instead, write "F. A. Author thanks" Sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page, not here.

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