Brief notes on preparing LaTeX manuscript for *Applied Physics Express* and *Japanese Journal of Applied Physics*

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The following equations are used for "SpectrumAnalyzer".

1. Main

$$y = -\frac{a_0}{2}\sqrt{E_t\pi}Li_{1/2}\left[-\exp\left(\frac{E - E_{\mathrm{VBM}}}{E_t}\right)\right]$$

$$y = -\frac{a_0}{2}\sqrt{E_t\pi}Li_{1/2}\left[-\exp\left(\frac{E - E_{\mathrm{VBM}}}{E_t}\right)\right] + \frac{a_1}{\sigma\sqrt{2\pi}}\exp\left[-\left(\frac{E - E_0}{2\sigma}\right)^2\right], \ \mathrm{FWHM} = 2.35\sigma$$

$$y = \frac{a_0}{1 + \exp\left(\dfrac{E - E_{\mathrm{F}}}{k_{\mathrm{B}}T}\right)} \otimes \frac{1}{\sigma\sqrt{2\pi}}\exp\left[-\left(\frac{E}{2\sigma}\right)^2\right], \ \mathrm{FWHM} = 2.35\sigma$$

$$y = \frac{a_0}{1 + \exp\left(\dfrac{-E + E_{\mathrm{F}}}{k_{\mathrm{B}}T}\right)} \otimes \frac{1}{\sigma\sqrt{2\pi}}\exp\left[-\left(\frac{E}{2\sigma}\right)^2\right]$$

$$y = \frac{1}{1 + \exp\left(1\dfrac{E - E_{\mathrm{F}}}{k_B T}\right)} \otimes s(x)$$

$$y = a_1\exp\left[-\left(\frac{E - E_1}{2\sigma_1}\right)^2\right], \ \mathrm{FWHM}_1 = 2.35\sigma_1$$

$$y = \sum_{n=1}^{N} a_n\exp\left[-\frac{(E - E_n)^2}{2\sigma_n^2}\right] + bg, \quad \mathrm{FWHM}_n = 2.35\,\sigma_n$$

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$$\hat{o}^{k+1}(x) = \hat{o}^k(x) + r[\hat{o}^k(x)][\hat{o}^k(x) - s(x) \otimes \hat{o}^k(x)]$$

$$r[\hat{o}^k(x)] = r_0 \left[1 - \frac{2}{b-a} \left| \hat{o}^k(x) - \frac{a+b}{2} \right| \right]$$

$$\hat{o}^{k+1}(x) = \hat{o}^k(x) \cdot i(x) / [s(x) \otimes \hat{o}^k(x)]$$

2. Options

2.1 Paper type

`jjap3.cls` has class options for paper types. You should choose the appropriate option listed in Table **??**. Default (without option) is for Regular Papers.

2.2 Two-column format

The `twocolumn` option may help estimate the length of your manuscript particularly for APEX, Rapid Communications (RC), and Brief Notes (BN), which have a limitation of **four** (APEX and RC) and **three** (BN) printed pages. If the `newtx` or `txfonts` package is available in your LaTeX system, you can estimate the length more accurately. However, prepare a one-column version when you submit your manuscript.

2.3 Equation numbers

The `seceq` option resets the equation numbers at the start of each section.

3. BibTeX

Unfortunately, it is not in the plan to create BibTeX style files for APEX/JJAP. Instead, those for APS or AIP can be used. See the comments in the preamble of this template.

Acknowledgment

If you need acknowledgment(s), use the `\acknowledgment` command. We have prepared variants of this command as `\acknowledgemnts`, `\acknowledgement`, and `\acknowledgements`.

Appendix

Use the `\appendix` command if you need an appendix(es). The `\section` command should follow even though there is no title for the appendix (see above in the source of this file).

References

1) The abbreviation for APEX should be "Appl. Phys. Express" in the reference list.

2) The abbreviation for JJAP should be "Jpn. J. Appl. Phys." in the reference list.

3) More abbreviations of journal titles are listed in "Instructions for Preparation of Manuscript", which is available at our Web site.

4) From jjap3.cls version 2.0 released on April 2011.