

# Preparing an article for publication in an Institute of Physics Publishing journal using L<sup>A</sup>T<sub>E</sub>X

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**Abstract.** This document describes the preparation of an article using L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> and `iopart.cls` (the IOP L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> preprint class file). This class file is designed to help authors produce preprints in a form suitable for submission to any of the journals published by IOP Publishing. Authors submitting to any IOP journal, i.e. both single- and double-column ones, should follow the guidelines set out here. On acceptance, their TeX code will be converted to the appropriate format for the journal concerned.

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## 1. Introduction

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In Ref. [1]... In Refs. [1, 2]... On webpage [3]...

## 2. Results and discussions

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### 2.1. Sample subsection

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**Figure 1.** This is sample picture – ShareLaTeX lion.

### 2.2. Simplified coding and extra features for tables

The basic coding format can be simplified using extra commands provided in the `iopart` class file. The commands up to and including the start of the tabular environment can be replaced by

```
\Table{\label{label}Table caption}
```

**Table 1.** A table with headings spanning two columns and containing notes. To improve the visual effect a negative skip (`\ns`) has been put in between the lines of the headings. Commands set-up by `\lineup` are used to aid alignment in columns. `\lineup` is defined within the `\Table` definition.

Nucleus	Thickness ( $\text{mg cm}^{-2}$ )	Composition	Separation energies	
			$\gamma$ , n (MeV)	$\gamma$ , 2n (MeV)
$^{181}\text{Ta}$	$19.3 \pm 0.1^{\text{a}}$	Natural	7.6	14.2
$^{208}\text{Pb}$	$3.8 \pm 0.8^{\text{b}}$	99% enriched	7.4	14.1
$^{209}\text{Bi}$	$2.86 \pm 0.01^{\text{b}}$	Natural	7.5	14.4

<sup>a</sup> Self-supporting.

<sup>b</sup> Deposited over Al backing.

this also activates the definitions within `\lineup`. The final three lines can also be reduced to `\endTable` or `\endtab`. Similarly for a table which does not fit in when indented `\fulltable{\label{label}caption} ... \endfulltable` or `\endtab` can be used.  $\LaTeX$  optional positional parameters can, if desired, be added after `\Table{\label{label}caption}` and `\fulltable{\label{label}caption}`.

`\centre{\#1}{\#2}` can be used to centre a heading `\#2` over `\#1` columns and `\crule{\#1}` puts a rule across `\#1` columns. A negative space `\ns` is usually useful to reduce the space between a centred heading and a centred rule. `\ns` should occur immediately after the `\` of the row containing the centred heading (see code for table 1). A small space can be inserted between rows of the table with `\ms` and a half line space with `\bs` (both must follow a `\` but should not have a `\` following them).

## References

- [1] J. Doe, Article name, *Phys. Rev. Lett.*
- [2] J. Doe, J. Smith, Other article name, *Phys. Rev. Lett.*
- [3] [www.google.pl](http://www.google.pl)