

Motivation

RevTeX is the de facto standard for writing papers in physics, however getting the bibliography to work properly can be non-intuitive hence this guide. A first note: deleting all auxiliary files (.aux, .log, etc), which is likely everything except for your .tex and .bib files and recompiling twice is the most accurate way to assess how the current TeX you have written will compile elsewhere. This guide presents a step-by-step guide to creating a bib file and making it work for RevTeX.

Minimal Working Example

Here we present a minimal working example using two files:

- references.bib
- article.tex

references.bib has just one `@article{}` clause. The file reads:

```
@article{klitzing1980new,
  title={New method for high-accuracy determination of the fine-structure
  constant based on quantized Hall resistance}},
  author={Klitzing, K v and Dorda, Gerhard and Pepper, Michael},
  journal={Phys. Rev. Lett.},
  volume={45},
  number={6},
  pages={494},
  year={1980},
  publisher={APS},
  doi={https://doi.org/10.1103/PhysRevLett.45.494}
}
```

What has happened here is that an instance of the `@article{}` class has created with the name `klitzing1980new`. The `@article{}` class is a *dictionary* with “keys” and “values”. The keys are to the left of the equal sign and the values are to the right of the equal sign and surrounded by braces. Following each key-value pair, there must be a comma.

Additionally for RevTeX to create a nice bibliography

1. The title must be in double curly braces `{{title}}`—this ensures that the text is interpreted literally and that it isn’t incorrectly reformatted
2. The authors first names/initials are separated, i.e. `K v` rather than `Kv`
3. The journal has its proper [ISO4 abbreviation](#)
4. `volume`, `pages`, and `year` are assigned values
5. There is either a `doi` or `url` key-value pair that gives the doi/web address of the paper.

Aside: How does this play with arXiv papers? Just use a `url` key instead of a `doi` key and include the arXiv number in the `journal` value like below:

```
@article{bauer2021fractional,  
  title={Fractional Chern Insulators with a Non-Landau Level Continuum Limit},  
  author={Bauer, David and Talkington, Spenser and Harper, Fenner and Andrews,  
  Bartholomew and Roy, Rahul},  
  journal={arXiv:2110.09565},  
  year={2021},  
  url={https://arxiv.org/abs/2110.09565}  
}
```

Now for the RevTeX `.tex` file, `article.tex`, which at minimum must import the needed packages, set up the title, include the body of the paper, and load the bibliography:

```
\documentclass[prl]{revtex4-2}  
  
%% import packages %%  
  
\usepackage{amsmath}  
\usepackage{...}  
  
\begin{document}  
  
  %% set up title %%  
  
  \title{...}  
  \author{...}  
  \affiliation{...}  
  \date{\today}  
  \begin{abstract}  
    ...  
  \end{abstract}  
  \maketitle  
  
  %% body of paper %%  
  
  ... \cite{klitzing1980new} ...  
  
  \begin{acknowledgments}  
    ...  
  \end{acknowledgments}  
  
  %% bibliography %%  
  
  \bibliographystyle{apsrev4-2}  
  \bibliography{references}  
  
\end{document}
```

This is then a minimally working example that includes one citation in the document.

Aside: What about submission time when you are asked for a .bbl file? Just replace the lines

```
\bibliographystyle{apsrev4-2}
\bibliography{references}
```

with

```
\input{references.bbl}
```

and include the `references.bbl` file with your submission.

Bonus: How to Include Supplemental Material

ArXiv processes submissions with multiple .tex files alphabetically which means that if you have the files `article.tex` and `supplement.tex`, arXiv will compile both documents then concatenate `supplement.pdf` to `article.pdf`.

To make numbering in the supplemental material start with S, you can add something like

```
\setcounter{section}{0}
\setcounter{equation}{0}
\setcounter{figure}{0}
\setcounter{table}{0}
\setcounter{page}{1}
\renewcommand{\thesection}{S\Roman{section}}
\renewcommand{\theequation}{S\arabic{equation}}
\renewcommand{\thefigure}{S\arabic{figure}}
\renewcommand{\bibnumfmt}[1]{[S##1]}
\renewcommand{\citenumfont}[1]{S##1}
```

to the header of `supplement.tex`. (Thank you StackExchange contributor I don't remember!)

The `supplement.tex` file can then be formatted similarly to the minimal example above, just with

```
\bibliography{references_sup}
```

instead of `\bibliography{references_sup}`, and with accompanying file `references_sup.bib`.