BEILSTEIN JOURNAL OF NANOTECHNOLOGY

Technical Handbook

The LaTeX Beilstein bundle for submissions to the
Beilstein Journal of Nanotechnology

Contents

Abstract

The Beilstein bundle provides a LaTeX class file and a BibTeX style file in accordance with the requirements of submissions to the *Beilstein Journal of Nanotechnology*. Although the files can be used for any kind of document, they have only been designed and tested to be suitable for submissions to the *Beilstein Journal of Nanotechnology*.

1 Introduction

The Beilstein bundle consists of three parts. The LaTeX class `beilstein.cls` is intended to be used for submissions. It is based on the standard article class, but was modified to meet the requirements for submissions to the *Beilstein Journal of Nanotechnology* as published in the "Instructions for Authors" [1]. Moreover the LaTeX class `beilstein.cls` facilitates ease of use by providing the authors with a set of useful macros and environments.

The BibTeX style `bjnano.bst` is used by the class to format citations and references correctly. It is based on Joseph Wright's `achemso.bst`, but was largely adjusted to work exactly on *Beilstein Journal of Nanotechnology* submissions.

Finally an example document is included in the Beilstein bundle. It is intended to act as a potential template for submissions, and illustrates the usage of the class and the BibTeX file.

2 Installation

2.1 Global installation via your TeX distribution

From version 1.2 onwards, the Beilstein bundle is distributed via CTAN and the major TeX distribution. Therefore after having updated your TeX Live or MiKTeX installation you can use the Beilstein files rightaway.

2.2 Local TDS installation

The Beilstein bundle is supplied with the TDS-ready ZIP file, `beilstein-tds.zip`. Simply unzip this file into your local texmf tree and run your hash program (e.g. `texhash` for recent TeXLive or MiKTeX systems).

To extract the bundle of files and to build the documentation yourself, run pdfLaTeX on `beilstein.dtx`. The files can then be installed either by putting them into the current working directory (where the main TeX file is) or – much better – as described above by moving the files to suitable places in a local texmf tree $LOCALTEXMF according to Table 1.

Table 1: Files contained in the Beilstein bundle.

File	→	Directory
`beilstein.cls`	→	$LOCALTEXMF/tex/latex/beilstein
`beilstein.dtx`	→	$LOCALTEXMF/source/latex/beilstein
`beilstein.ins`	→	$LOCALTEXMF/source/latex/beilstein
`beilstein-template.bib`	→	$LOCALTEXMF/tex/latex/beilstein
`beilstein-template.tex`	→	$LOCALTEXMF/tex/latex/beilstein
`bjnano.bst`	→	$LOCALTEXMF/bibtex/bst/beilstein
`bjnano_logo.pdf`	→	$LOCALTEXMF/source/latex/beilstein
`figure1.pdf`	→	$LOCALTEXMF/doc/latex/beilstein
`scheme1.pdf`	→	$LOCALTEXMF/tex/latex/beilstein
`scheme2.pdf`	→	$LOCALTEXMF/tex/latex/beilstein

If you are not sure about local texmf trees at all, you can have a look at http://www.tex.ac.uk/cgi-bin/texfaq2html?label=inst-wlcf for more information.

3   Requirements

The Beilstein class was designed to rely on standard LaTeX packages only. It requires the following ones:

- Internal packages

  - xkeyval,

  - ifthen,

  - babel,

  - inputenc, fontenc.

- Fonts

  - mathptmx, helvet, courier,

  - textcomp.

- Page layout

  - geometry,

  - ragged2e, everysel, footmisc,

  - setspace,

  - lineno.

- Math and science

  - amsmath, amstext, amssymb, amsgen, amsbsy, amsopn, amsfonts.

- Floats

  - float,

  - flafter,

  - graphicx,

  - array,

  - tabularx,

  - longtable.

- Bibliography

  - natbib.

All these packages should be present in any major TeX distribution and are also available from *The Comprehensive TeX Archive Network* (CTAN) at http://www.ctan.org.

A complete list of used files and tested versions can be found in the appendix on p. 16.

4 The class file

4.1 Class options

Most of the things to be considered for submissions to the *Beilstein Journal of Nanotechnology* are directly included into the class file. There is only one major choice an author has to make, i.e. to determine the type of manuscript he wants to submit.

manuscript=   The Beilstein-Institut has defined five such types and each type has a special purpose and structure. The chosen option is used internally to check for mandatory sections and elements. The types are designed to give the author a slight control of the article's structure.

The selection of the type is done by the key-value-option `manuscript` which takes the values listed in Table 2.

To switch your document to a "Book Review Article" e.g. you simply use `\documentclass[manuscript=bookreview]{beilstein}`. In case of an unknown value, the class will use the default option.

american   Two other options of a more technical aspect exist. Firstly you can tell LaTeX
british

Table 2: Possible values for key-value option "manuscript".[a]

Option	Meaning
`manuscript=bookreport`	Book Report Article
`manuscript=commentary`	Commentary Article
`manuscript=fullresearchpaper`	*Full Research Paper*
`manuscript=letter`	Letter Article
`manuscript=review`	Review Article
`manuscript=suppinfo`	Supporting Information

[a]Default option is printed in italics.

whether you use American or British English (see Table 3). Internally only different hyphenation patterns are used. So you might not see a difference in the output at first sight.

Table 3: Options for language.[a]

Option	Meaning
`american`, `USenglish`	*Use American English*
`british`, `english`, `UKenglish`	Use British English

[a]Default option is printed in italics.

applemac   Secondly, you might want to change the input encoding of your document, e.g.
latin1   when using accented characters. Therefore, the class offers a small set of options
utf8   (see Table 4). In most cases no change is necessary. However, you should consider
using the `utf8` option as this the standard encoding nowadays.

Table 4: Options for input encoding.[a]

Option	Meaning
`applemac`	Use special Mac encoding
`latin1`	*Use ISO8859-1 encoding*
`utf8`	Use UTF-8 encoding

[a]Default option is printed in italics.

Further options have been added to the recent version of the class:

sectionnumbering   The Beilstein class disables the usual section numbering mechanism by changing
the counter "secnumdepth" appropriately. You can switch back by using the class

option `sectionnumbering=true` or just `sectionnumbering`. Doing so all non-starred sectioning commands will be numbered while the starred versions still have no number.

`fnpara`   By default footnotes can only be used in tables and are printed one per line. This can be changed to paragraph mode, either locally (see page 10), or globally. For that purpose the Beilstein class offers the option `fnpara=true` or just `fnpara`.

`Global options`   The Beilstein class was developed to include all necessary requirements. However, if you need extra options for packages already being loaded by the class itself, you can add them to the list of global options.

4.2   Title page

The *Beilstein Journal of Nanotechnology* has its own title page format. However, a more or less standard set of LaTeX commands can be used to provide the necessary information right after `\begin{document}`:

`\title`   The title of your manuscript is given with `\title{⟨title⟩}`. There is also an optional argument which can be used when writing a document for supporting information, e.g. `\title[⟨sititle⟩]{⟨title⟩}`. Both information are automatically used on the titlepage of supporting information. For more information about creating Supporting Information files please see p. 8.

`\sititle`   As an alternative to the optional argument of `\title` you can use macro `\sititle{⟨sititle⟩}`.

`\author`   Each author of the article is named within its own `\author` command. For `\author*`   a corresponding author the extended version `\author*` must be used. It has an additional second mandatory argument holding the author's email address.

With both commands the author's name is printed followed by a superscript number for the appropriate affiliation(s). As these numbers can be the same for several authors, an optional argument for a specific number can be used:
`\author[⟨affiliation number⟩]{⟨author's name⟩}` or
`\author*[⟨affiliation number⟩]{⟨author's name⟩}{⟨email address⟩}`.

If you want to provide an email address for a non-corresponding author, there is a second optional argument:
CAUTION   `\author[⟨affiliation number⟩][⟨email address⟩]{⟨author's name⟩}`

To add an email address the first optional argument has to be present in any case, e.g. empty if there is no extra affiliation number.

`\affiliation`   The affiliations are given with `\affiliation{⟨postal address⟩}` and are numbered consecutively. Each `\author` with an own address is followed by one or more `\affiliation` commands (see example below). This can also be combined with the optional affiliation number.

`\maketitle`   To print the title page use the command `\maketitle`.

A complete title block might look like this:

```
1  \begin{document}
2  \title{Synthesis of highly substituted allenylsilanes by
3      alkylidenation of silylketenes}
4  %Corresponding author:
5  \author*{Stephen P. Marsden}{s.p.marsden@leeds.ac.uk} %
6  \affiliation{School of Chemistry, University of Leeds, Leeds
7      LS2 9JT, United Kingdom}
8  %A second author with two affiliations and an email address:
9  %Important: empty first optional argument
10 \author[][Ducept@...]{Pascal C. Ducept}
11 \affiliation{Department of Chemistry, Imperial College London,
12     London SW7 2AY, United Kingdom}
13 \affiliation{An alternative Address could be here}
14 %A third author with the same affiliation as the second:
15 \author[2]{X. Y.}
16 \maketitle %print the title page
```

For abstract and keywords please have a look at section 4.4.

4.3   Section headers

You can use the standard LaTeX sectioning commands (except for `\chapter`) to structure your document. Depending on the type of manuscript some sections are mandatory while others are optional.

For a "Full Research Paper" the following section headings might be used:

```
1  \section{Introduction}
2  ...
3  \section{Experimental}
4  ...
5  \section{Results and Discussion}
6  ...
7  \section{Conclusion}
```

Table 5 gives an overview of all allowed section headings for the different Beilstein class manuscript types.

4.4   Special sections

abstract   After the title page an abstract must be inserted (except for "Book Reports" and "Commentaries"). To meet the specifications for *Beilstein Journal of Nanotechnology* submissions LaTeX redefines the usual `abstract` environment internally.

Table 5: Allowed section headings for the different Beilstein class manuscript types.

Section heading	Manuscript type[a]				
	BR[b]	CA[c]	FR[d]	LA[e]	RA[f]
`Conclusion`	$-$	$+$	*o*	$-$	$+$
`Book Details`	$+$	$-$	$-$	$-$	$-$
`Discussion`	$-$	$+$	$-$	$-$	$-$
`Experimental`	$-$	$-$	*o*	$-$	$-$
`Findings`	$-$	$-$	$-$	$+$	$-$
`Introduction`	$-$	$+$	$+$	$-$	$-$
`Main Text`	$+$	$-$	$-$	$-$	$-$
`Results and Discussion` (may be separate)	$-$	$-$	$+$	$-$	$-$
`Review`	$-$	$-$	$-$	$-$	$+$

[a]$+$ denotes a mandatory, *o* an optional and $-$ a non-feasible section
[b]Book Report Article
[c]Commentary Article
[d]Full Research Paper
[e]Letter Article
[f]Review Article

`\background`
`\results`
`\conclusion`
    For the special items of the abstract mentioned in the guidelines the three commands `\background`, `\results` and `\conclusion` are defined. Each command starts a new line and prints the item's name in boldface.

`\keywords`
    Although the "Keywords" could be considered as a part of the title page they are inserted right after the abstract. There can be an arbitrary number of keywords, and therefore the `\keywords` macro has only one mandatory argument holding the keywords separated by semicolons.

    An abstract with keywords can look like this:

```
1  \begin{abstract}
2  \background ...
3  \results ...
4  \conclusion ...
5  \end{abstract}
6  \keywords{allenylsilanes; rhodium(II) octanoate-mediated
7     rearrangement; silylketenes; titanium carbenoids; ylide}
```

`acknowledgements`
    The "Acknowledgements" are an optional part of all article types. As the layout differs from that of the main text, they should be written using the environment `acknowledgements`:

```
1  \begin{acknowledgements}
2  I would like to thank ...
3  \end{acknowledgements}
```

suppinfo   Another optional section of an article is the "Supporting Information" which may consist of various "Supporting Information Files" containing information about additional external data. To begin this section simply use \begin{suppinfo}.

\sifile   Inside the suppinfo environment the command \sifile can be used to add a "Supporting Information File". Its syntax is:

\sifile[⟨*long description*⟩]{⟨*filename*⟩}{⟨*format*⟩}{⟨*short description*⟩}

Each \sifile can be followed by a \label{⟨*labelname*⟩} to cross-reference to that file in the main text using \ref{⟨*labelname*⟩}.

The complete section could look like this:

```
1  \begin{suppinfo}
2  \sifile{experimental_part.pdf}{PDF}{Experimental part}
3  \label{si:experimental-part}
4  \sifile[A long description about the experimental data stored in
5    this file]{nmr1.pdf}{PDF}{NMR spectra of compounds \CN{1},
6    \CN{2}, \CN{6} and \CN{7}.}
7  \end{suppinfo}
```

LaTeX source   A Supporting Information File can be created from a LaTeX source using the Beilstein LaTeX class. The same syntax that was used for the title page of the main manuscript can be used for the Supporting Information. An additional title for the Supporting Information (e.g. "Additional experimental data") can be added by using the [⟨*sititle*⟩] option of the \title command: \title[⟨*sititle*⟩]{⟨*manuscript title*⟩}.

\sititle   Alternatively, the macro \sititle{⟨*sititle*⟩} can be used.

4.5   Floats

figure   LaTeX already knows about the built-in environments table and figure. For
table   *Beilstein Journal of Nanotechnology* publications a third environment is added:
scheme   scheme. There is no difference in usage between scheme and the former two. To add a scheme "AScheme.pdf" you can enter the following:

```
1  \begin{scheme}
2  \caption{A scheme demonstrating something.}
3  \label{scheme:something}
4  \includegraphics[width=16.8cm,keepaspectratio]{AScheme}
5  \end{scheme}
```

PDFLATEX is limited to a small set of graphic formats. All files have to be either in the PDF, PNG or JPG format. The EPS format is fine as well, because it can be converted easily to PDF (e.g. using epstopdf).

Other formats such as SVG or WMF have to be processed with a converter such as ImageMagick [3].

\caption   Please note that it does not matter whether \caption is put above or below
\label   \includegraphics. The caption will always be below the scheme in the output file. The same mechanism is used to put figure captions below and table captions above the content. If you want to add a concise title to a float, please use the
\ref   optional argument: \caption[⟨*concise title*⟩]{⟨*legend*⟩}. However, as common in LATEX \label{⟨*labelname*⟩} must always follow \caption, otherwise a corresponding \ref command will yield wrong results.

\sglcolfigure   During the final typesetting process the article will be printed in double-column
\sglcolscheme   mode. Although this does not make any difference for section headings and text,
sglcoltabular   floating objects can be formatted single-column (with a maximum width of 8.2 cm)
sglcoltabularx   or double-column (with a maximum width of 16.8 cm).

The Beilstein class defines some macros to comfortably add floats without bothering about the correct width. For single-column floats you can use \sglcolfigure{⟨*filename*⟩} and \sglcolscheme{⟨*filename*⟩} as well as the environments sglcoltabular and sglcoltabularx. The latter two are meant as a replacement for tabular and tabularx respectively.

A single-column scheme containing "results-sil.pdf" can then be inserted as:

```
1  \begin{scheme}
2  \sglcolscheme{results-sil} %or alternatively:
3    %\includegraphics[width=8.2cm,keepaspectratio]{results-sil}
4  \caption{Reaction of substituted silylketenes with
5    ester-stabilised phosphoranes.}
6  \label{scheme:silylketenes}
7  \end{scheme}
```

\dblcolfigure   The same macros and environments with "dbl" instead of "sgl" are defined for
\dblcolscheme   double-column floats. Thus for a table you can use:
dblcoltabular
dblcoltabularx
```
1  \begin{table} %floating environment
2  \caption{Reaction of substituted silylketenes with ester-stabilised
3    phosphoranes.}
4  \label{tab:silylketenes}
5  \begin{dblcoltabularx}{|l|>{\bfseries}l|>{\bfseries}l|l|l|X|X|}\hline
6  \bfseries Entry & \bfseries Ketene & \bfseries Ylide &
7  \bfseries Temp (\celsius) & \bfseries t (h) & \bfseries Solvent &
8  \bfseries Yield 6/7 (8)\\\hline
```

```
 9    1 & 1a & 4 & 80 & 24 & PhH & 54\,\%\\\hline
10    2 & 1a & 5 & rt & 3  & CHCL & 60\,\%\\\hline
11    ...
12    \end{dblcoltabularx}
13    \end{table}
```

More information on the `tabularx` environment can be found in the documentation of the `tabularx` package [2]. The standard `tabular` environment with the common column parameters "l, c, r, p" is supported as well.

`longtable`   If you have a table that is longer than one page, please use the `longtable` environment. Have a look at the package's documentation for more information.

`\footnote`   Footnotes are only allowed in tables (see appendix). You can use them in the legend as well as within the table. Lowercase letters are used automatically and the footnote text is written below the table.

`\fnpara`   You can use `\fnpara` to switch to paragraph mode for footnotes in all following

`\fnnormal`   tables. To restore the usual footnote formatting just use `\fnnormal`.

```
 1    \fnpara
 2    %Table with footnotes in paragraph mode
 3    \begin{table}
 4    ...
 5    \end{table}
 6    ...
 7    \fnnormal
 8    %Table with normal footnotes
 9    \begin{table}
10    ...
11    \end{table}
```

4.6   Cross-references

One of LaTeX biggest advantages is its powerful mechanism for cross-references. Therefore you should use it for each of the different objects. This includes among others floats, Supporting Information files and other sections. Just add the standard `\label{⟨labelname⟩}` command right after `\caption` or `\sifile` and call the `\ref{⟨labelname⟩}` macro to get the correct number of the referenced object. In the example table above, `\ref{tab:silylketenes}` gives the actual number of the table.

`\cref`   To make this mechanism even more comfortable, the Beilstein class loads the package cleveref (only if installed already) which defines a command `\cref`. In addition to the number of the object its type is printed as well, i.e. instead of writing "see table `\ref{tab:silylketenes}`" a simple "see `\cref{tab:silylketenes}`"

gives the same result. Note that \cref can also be used for cross-referencing to a "Supporting Information File".

4.7   Writing chemistry

LATEX is a very powerful tool for mathematical typesetting. All built-in commands and structures are provided by the Beilstein class as well. In addition, the packages of the $\mathcal{AMS}$, amsmath, amssymb etc., are loaded.

$...$ You can use the standard delimiters $...$ like δ for δ for inline math
equation   and environments like equation for displayed math. Please use the inline math mode for single numbers like -2 as well to get the correct minus sign. Please note that – as described in the "Instructions for Authors" – equations must fit a width of 8.2 cm (single column), and longer equations should be split accordingly.

\up...   Small Greek letters are usually printed in italics. If the letters should be in an upright font, please use \up..., e.g. \upalpha for α.

\var...   amsmath provides special commands for upper Greek letters in italics, e.g. \varTheta for Θ.

\text   If you have text inside a formula, e.g. as an index, you can use \text to typeset it in an upright font and in the correct size.

```
1  $\text{amplitude sensitivity}=10$\\
2  $C_\text{PEG}=170$
```

However, for chemical elements and reactions the LATEX math mode is not sufficient, because many chemical expressions have to be typeset in an upright font and not in italics. For example, have a look at O_2 which results in O_2 instead of O$_2$. Using \text as mentioned is possible as well as writing O$_2$, but both methods are not very comfortable when they have to be applied at several places. On the other hand the commands _ for subscripts and ^ for superscripts should remain. Therefore a special \chem macro is provided by the Beilstein class.

Chemical specialities: the \chem and \unit macros
Although there already exist many powerful packages like siunitx or chemsym to write physical and chemical units and symbols, the Beilstein class implements its own rather simple interface to keep all submitted documents consistent and make it easier to process them during the final typesetting.

\chem   For chemical formulas the macro \chem is defined. Inside its argument _ and
^   ^ are active like in the math mode. The rest, e.g. element names are written in
_   an upright format.

```
1  \chem{CuCl_2} and \chem{{SO_4}^{2-}}\\
2  \chem{^2_1H+{^3_1H}}\\
3  $C\chem{_{Cu^{2+}}}\times 10^{-2}=0.005(1)\,\text{M}$\\
```

$CuCl_2$ and $SO_4{}^{2-}$
$^2_1H + {}^3_1H$
$C_{Cu^{2+}} \times 10^{-2} = 0.005(1)\,\text{M}$

\unit   For units more or less the same is valid. For instance, writing cm^2 does not result in cm^2, but cm^2. Thus, you should use \unit to enter all units correct and more comfortable. If more than one unit is needed, ~ can be used to separate them.

```
1  $\text{amplitude sensitivity}=10\unit{nA~V^{-1}}$\\
2  $C_\text{PEG}=170\unit{mg/ml}$
```

$\text{amplitude sensitivity} = 10\,\text{nA}\,\text{V}^{-1}$
$C_{\text{PEG}} = 170\,\text{mg/ml}$

\angstrom   Some units have special macros to make their use easier (see Table 6). The
\celsius   commands \percent and \permil can be used in the main text as well.
\degree
\permil   Table 6: Special macros for units.
\percent

Unit name	LaTeX macro	Output
ångström	\angstrom	Å
celsius	\celsius	°C
degree	\degree	°
permil	\permil	‰
percent	\percent	%

\rightarrow   LaTeX provides several arrows for chemical reactions. The most common ones
\rightleftarrows   are listed in Table 7. Many more can be obtained from amssymb.
\rightleftharpoons
\leftrightarrow 1 \chem{CH_4+2O_2\rightarrow CO_2 + 2H_2O}\\
\leftrightarrow 2 \chem{2H_{2(g)}+O_{2(g)}\to 2H_2 O_{(l)}}\ \Delta H=-286 %
\Rightarrow   3   \unit{\frac{kJ}{mol}}}\\
\uparrow   4 \chem{N_{2(g)}+3H_{2(g)}\rightleftharpoons 2NH_{3(g)}}
\downarrow
\curvearrowright
\rightharpoondown

$CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$
$2H_{2(g)} + O_{2(g)} \rightarrow 2H_2O_{(l)}\ \Delta H = -286\,\frac{kJ}{mol}$
$N_{2(g)} + 3H_{2(g)} \rightleftharpoons 2NH_{3(g)}$

\CN   Compounds have to be typeset in boldface. Instead of \textbf \CN can also be used for a logical markup. For ranges of compound numbers \nobreakdash- avoids linebreaks.

Table 7: LaTeX macros for arrows used in chemical reactions.

Arrow	Macro	Usage
$\rightarrow$	`\rightarrow` or `\to`	One-way chemical reactions
$\rightleftarrows$	`\rightleftarrows`	Two-way chemical reactions
$\rightleftharpoons$	`\rightleftharpoons`	Equilibria
$\leftrightarrow$	`\leftrightarrow`	Resonance structures
$\Rightarrow$	`\Rightarrow`	Retrosynthetic analysis
$\uparrow$	`\uparrow`	
$\downarrow$	`\downarrow`	
$\curvearrowright$	`\curvearrowright`	
$\rightharpoondown$	`\rightharpoondown`	

`\IUPAC`   Some chemical products have quite a long name which sometimes results in a
`\-`   bad hyphenation. If you want to influence this you can use `\-` for breakable hy-
`\|`   phens and `\|` for invisible breakpoints and then pass it as an argument to `\IUPAC`,
e.g.
`\IUPAC{4,7-dimethyl\-3,5,7-tri\|hydro-1,2,4,7-tetrazocin\-3,8-dione}`.
Chemical structures from external programs
There are a lot of highly specified software programs like ChemDraw® to draw
complex chemical structures. You should always use such programs and then
export your drawings to a pdf file and include it into your LaTeX document as
described in section 4.5. If you get an eps file that is fine as well. You just have to
convert it with `epstopdf file.eps` from the command line (shell). You can export
your graphic file to more or less every format and convert it to pdf, but using a
vector format right away is highly recommended.

5 Managing references with BibTeX

5.1 The BibTeX style files

The Beilstein bundle includes a special BibTeX style `bjnano.bst` which implements
all needed entry types and fields as well as format specifications of the *Beilstein
Journal of Nanotechnology*. It is always used automatically by the Beilstein class.
The only thing you have to do is to store all your bibliography data in a BibTeX
file. The exact structure of this BibTeX database is described in section 5.2.

`\cite`   To cite any of your references the LaTeX macro `\cite` gets a single key or a
list of keys for those entries, i.e. `\cite{⟨key⟩}` or `\cite{⟨key1,...,keyN⟩}`.

`\bibliography`   To output the section "References" containing all information from the BibTeX
database for all citations given with the `\cite` command, the standard call
`\bibliography{⟨database⟩}` has to be used just before `\end{document}`.

5.2 Structure of a BIBTEX database

The BIBTEX programming language knows the most common entry types cited in academic papers. However, a few like "WWW" for internet resources and links or "SOFTWARE" are missing. They could be emulated, but it is much better to directly introduce them to BIBTEX. The same is valid for special data fields.

On the other hand, not all entry types and fields, that are in included in BIBTEX, are needed and allowed in *Beilstein Journal of Nanotechnology* submissions. They could even mess up the output when not treated correctly. Therefore the entry types are restricted to the following ones:

- `@ARTICLE`
- `@BOOK`
- `@INCOLLECTION`
- `@INPRESS`
- `@INPROCEEDINGS`
- `@MISC`
- `@PATENT`
- `@PHDTHESIS`
- `@PROCEEDINGS`
- `@SOFTWARE`
- `@WWW`

In addition to the well known data fields the following ones were added:

doi Digital Object Identifier, e.g. `doi = {10.1080/02678290500291699}` (optional for `@article` and `@inpress`)

url URL for any internet source, e.g.
`url = {http://www.beilstein-journals.org/bjnano}` (mandatory for `@WWW`)

urldate Date when the url was visited last, e.g. `urldate = {Sep 12, 2007}` (mandatory for `@WWW`)

venue Information about a conference (place and time), e.g.
`venue = {Baltimore, MD, June 27--30, 1996}`
(mandatory for `@PROCEEDINGS` and `@INPROCEEDINGS`

version Version of a software, e.g. `version = {Revision C.02}` (mandatory for `@SOFTWARE`)

> The Beilstein bundle contains the file "beilstein-template.bib" with example entries for all types of references described in [1, pp 5–6].

References

[1] *Beilstein-Institut:* Instructions for Authors for the *Beilstein Journal of Nano-technology*, Version 1.1.

[2] *David Carlisle:* The `tabularx` package, v2.07 (1999/01/07), http://www.ctan.org/tex-archive/help/Catalogue/entries/tabularx.html.

[3] *ImageMagick:* Convert, Edit, and Compose Images, http://www.imagemagick.org.

Appendix

Deactivated macros

A few macros were "deactivated", i.e. their usage results in an error. Right now this is valid for the standard commands listed in Table 8.

Table 8: Forbidden macros.

Macro	Alternative
`\and`	Use `\author` and `\author*` for every author
`\footnote{⟨text⟩}`	None[a]
`\thanks{⟨affiliation⟩}`	Use `\affiliation{⟨affiliation⟩}`

[a]`\footnote` remains active in the `table` environment.

List of package files

File name	Version
beilstein.cls	2018/01/20 v1.4 Template for submissions to the "Beilstein Journal of Nanotechnology" (BJNANO)
xkeyval.sty	2014/12/03 v2.7a package option processing (HA)
xkeyval.tex	2014/12/03 v2.7a key=value parser (HA)
ifthen.sty	2014/09/29 v1.1c Standard LaTeX ifthen package (DPC)
article.cls	2014/09/29 v1.4h Standard LaTeX document class
size12.clo	2014/09/29 v1.4h Standard LaTeX file (size option)
babel.sty	2018/01/24 3.17 The Babel package
american.ldf	2017/06/06 v3.3r English support from the babel system
inputenc.sty	2015/03/17 v1.2c Input encoding file
utf8.def	2017/01/28 v1.1t UTF-8 support for inputenc
t1enc.dfu	2017/01/28 v1.1t UTF-8 support for inputenc
ot1enc.dfu	2017/01/28 v1.1t UTF-8 support for inputenc
omsenc.dfu	2017/01/28 v1.1t UTF-8 support for inputenc
fontenc.sty	
t1enc.def	2017/04/05 v2.0i Standard LaTeX file
mathptmx.sty	2005/04/12 PSNFSS-v9.2a Times w/ Math, improved (SPQR, WaS)
helvet.sty	2005/04/12 PSNFSS-v9.2a (WaS)
courier.sty	2005/04/12 PSNFSS-v9.2a (WaS)
textcomp.sty	2017/04/05 v2.0i Standard LaTeX package
ts1enc.def	2001/06/05 v3.0e (jk/car/fm) Standard LaTeX file
ts1enc.dfu	2017/01/28 v1.1t UTF-8 support for inputenc

File name	Version
geometry.sty	2010/09/12 v5.6 Page Geometry
ifpdf.sty	2017/03/15 v3.2 Provides the ifpdf switch
ifvtex.sty	2016/05/16 v1.6 Detect VTeX and its facilities (HO)
ifxetex.sty	2010/09/12 v0.6 Provides ifxetex conditional
setspace.sty	2011/12/19 v6.7a set line spacing
ragged2e.sty	2009/05/21 v2.1 ragged2e Package (MS)
everysel.sty	2011/10/28 v1.2 EverySelectfont Package (MS)
footmisc.sty	2011/06/06 v5.5b a miscellany of footnote facilities
lineno.sty	2005/11/02 line numbers on paragraphs v4.41
amsmath.sty	2017/09/02 v2.17a AMS math features
amstext.sty	2000/06/29 v2.01 AMS text
amsgen.sty	1999/11/30 v2.0 generic functions
amsbsy.sty	1999/11/29 v1.2d Bold Symbols
amsopn.sty	2016/03/08 v2.02 operator names
amssymb.sty	2013/01/14 v3.01 AMS font symbols
amsfonts.sty	2013/01/14 v3.01 Basic AMSFonts support
multicol.sty	2017/04/11 v1.8q multicolumn formatting (FMi)
float.sty	2001/11/08 v1.3d Float enhancements (AL)
flafter.sty	2017/04/11 v1.4a Standard LaTeX floats after reference (FMi)
graphicx.sty	2017/06/01 v1.1a Enhanced LaTeX Graphics (DPC,SPQR)
graphics.sty	2017/06/25 v1.2c Standard LaTeX Graphics (DPC,SPQR)
trig.sty	2016/01/03 v1.10 sin cos tan (DPC)
graphics.cfg	2016/06/04 v1.11 sample graphics configuration
pdftex.def	2018/01/08 v1.0l Graphics/color driver for pdftex
array.sty	2016/10/06 v2.4d Tabular extension package (FMi)
tabularx.sty	2016/02/03 v2.11 'tabularx' package (DPC)
longtable.sty	2014/10/28 v4.11 Multi-page Table package (DPC)
etoolbox.sty	2017/11/22 v2.5 e-TeX tools for LaTeX (JAW)
natbib.sty	2010/09/13 8.31b (PWD, AO)
url.sty	2013/09/16 ver 3.4 Verb mode for urls, etc.
xspace.sty	2014/10/28 v1.13 Space after command names (DPC,MH)
cleveref.sty	2013/12/28 v0.19 Intelligent cross-referencing
ts1cmr.fd	2014/09/29 v2.5h Standard LaTeX font definitions
t1ptm.fd	2001/06/04 font definitions for T1/ptm.
supp-pdf.mkii	
epstopdf-base.sty	2016/05/15 v2.6 Base part for package epstopdf
infwarerr.sty	2016/05/16 v1.4 Providing info/warning/error messages (HO)
grfext.sty	2016/05/16 v1.2 Manage graphics extensions (HO)
kvdefinekeys.sty	2016/05/16 v1.4 Define keys (HO)
ltxcmds.sty	2016/05/16 v1.23 LaTeX kernel commands for general use (HO)
kvoptions.sty	2016/05/16 v3.12 Key value format for package options (HO)

Continued on next page

File name	Version
kvsetkeys.sty	2016/05/16 v1.17 Key value parser (HO)
etexcmds.sty	2016/05/16 v1.6 Avoid name clashes with e-TeX commands (HO)
ifluatex.sty	2016/05/16 v1.4 Provides the ifluatex switch (HO)
pdftexcmds.sty	2018/01/21 v0.26 Utility functions of pdfTeX for LuaTeX (HO)
epstopdf-sys.cfg	2010/07/13 v1.3 Configuration of (r)epstopdf for TeX Live
t1phv.fd	2001/06/04 scalable font definitions for T1/phv.
ot1ztmcm.fd	2000/01/03 Fontinst v1.801 font definitions for OT1/ztmcm.
omlztmcm.fd	2000/01/03 Fontinst v1.801 font definitions for OML/ztmcm.
omsztmcm.fd	2000/01/03 Fontinst v1.801 font definitions for OMS/ztmcm.
omxztmcm.fd	2000/01/03 Fontinst v1.801 font definitions for OMX/ztmcm.
ot1ptm.fd	2001/06/04 font definitions for OT1/ptm.

Change History