achemso — Support for American Chemical Society journal style*

Joseph Wright†

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Abstract

The achemso bundle provides a BibTeX style file following the requirements of the American Chemical Society (ACS), and a package to pass settings to the BibTeX style. It also includes a class which was used for submission support in the past.

All of this material is largely of historical interest and is retained for stability. For new material, the biblatex style chem-acs is available for bibliographies, and a short template for the ACS website is better suited to submission.

1 Implementation

A lot of the work done by the package is also needed by the class. Loading the package and the class makes load-order awkward. Instead, the two parts are done in one place. Sandwiching the common code are two slices of dedicated material for the class and the package. Some of this is needed "early", before the common material, whilst the rest is "late".

1.1 Early class-only code

So that there is no confusion, the base class is loaded early.

```
⟨*class⟩
\ProvidesClass{achemso}
  [2025-09-22 v3.14 Submission to ACS journals]
\LoadClass[12pt,letter]{article}
```

`\acs@warning` The code for a warning is created so that it works for the package too.

```
\newcommand*\acs@warning{\ClassWarning{achemso}}
⟨/class⟩
```

*This file describes version v3.14, last revised 2025-09-22.

†E-mail: joseph@texdev.net

1.2 Early package-only code

The package and the class should not both be loaded, as the two use the same internal macro names. On the other hand, if the class is not in use a reminder is printed to use it if possible.

```
⟨*package⟩
\ProvidesPackage{achemso}
  [2025-09-22 v3.14 Support for ACS journals]
\@ifclassloaded{achemso}{%
  \PackageInfo{achemso}{%
    You have already loaded the 'achemso' class:\MessageBreak
    loading the package will abort%
  }%
  \endinput
}{%
  \PackageInfo{achemso}{%
    When writing a submission to an ACS journal, please\MessageBreak
    use the achemso document class%
  }%
}
```

`\acs@warning` The code for a warning is created so that it works for the class too.

```
\newcommand*\acs@warning{\PackageWarning{achemso}}
⟨/package⟩
```

1.3 Common code

`\acs@ifundefined` A non-expandable test for defined macros: does not add to the hash table.

```
⟨*package | class⟩
\newcommand*\acs@ifundefined[1]{%
  \begingroup\expandafter\expandafter\expandafter\endgroup
  \expandafter\ifx\csname #1\endcsname\relax
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi
}
```

The first stage needed is to read the package options given. Although xkeyval was perhaps not the best choice, changing this now would be rather risky.

```
\RequirePackage{xkeyval}
```

`\acs@keyval@bool` A support macro for making Boolean options: the xkeyval version is only available in newer releases.

```
\newcommand*\acs@keyval@bool[2]{%
  \acs@ifundefined{acs@#1#2}{%
    \acs@warning{Unknown option '#2' for key #1}%
  }{%
    \@nameuse{acs@#1#2}%
  }%
}
```

\ifacs@abbreviations
\ifacs@articletitle
\ifacs@biochem
\ifacs@chaptertitle
\ifacs@doi
\ifacs@email
\ifacs@hyperref
\ifacs@keywords
\ifacs@super

These are all very trivial definitions: to avoid issues with older versions of xkeyval each definition is done directly.

```
\newif\ifacs@abbreviations
\newif\ifacs@articletitle
\newif\ifacs@biochem
\newif\ifacs@doi
\newif\ifacs@chaptertitle
\newif\ifacs@email
\newif\ifacs@hyperref
\newif\ifacs@keywords
\newif\ifacs@super
\define@key{acs}{abbreviations}[true]{%
  \acs@keyval@bool{abbreviations}{#1}%
}
\define@key{acs}{articletitle}[true]{%
  \acs@keyval@bool{articletitle}{#1}%
}
\define@key{acs}{biochem}[true]{%
  \acs@keyval@bool{biochem}{#1}%
}
\define@key{acs}{doi}[true]{%
  \acs@keyval@bool{doi}{#1}%
}
\define@key{acs}{chaptertitle}[true]{%
  \acs@keyval@bool{chaptertitle}{#1}%
}
\define@key{acs}{email}[true]{%
  \acs@keyval@bool{email}{#1}%
}
\define@key{acs}{hyperref}[true]{%
  \acs@keyval@bool{hyperref}{#1}%
}
\define@key{acs}{keywords}[true]{%
  \acs@keyval@bool{keywords}{#1}%
}
\define@key{acs}{super}[true]{%
  \acs@keyval@bool{super}{#1}%
}
\define@key{acs}{usetitle}[true]{%
  \acs@keyval@bool{articletitle}{#1}%
}
```

\acs@journal
\acs@layout
\acs@manuscript
\acs@maxauthors

Trivial again: done without using xkeyval for the same reasons as before.

```
\newcommand*\acs@journal{jacsat}
\newcommand*\acs@layout{traditional}
\newcommand*\acs@manuscript{article}
\newcommand*\acs@maxauthors{15}
\define@key{acs}{journal}{%
  \def\acs@journal{#1}%
}
\define@key{acs}{layout}{%
  \def\acs@layout{#1}%
}
\define@key{acs}{manuscript}{%
```

```
  \def\acs@manuscript{#1}%
}
\define@key{acs}{maxauthors}{%
  \def\acs@maxauthors{#1}%
}
```

`\ifacs@etal@truncate` `\acs@etal@firstonly` `\acs@etal@truncate`

The setup for the `etalmode` option is quite simple: just look for the appropriate macros.

```
\newif\ifacs@etal@truncate
\define@key{acs}{etalmode}{%
  \acs@ifundefined{acs@etal@#1}{%
    \acs@warning{%
      Unknown value `#1' for\MessageBreak  etalmode option%
    }%
  }{%
    \@nameuse{acs@etal@#1}%
  }%
}
\newcommand*\acs@etal@firstonly{\acs@etal@truncatefalse}
\newcommand*\acs@etal@truncate{\acs@etal@truncatetrue}
```

`\acs@activate@biblabel`

The `biochemistry` option is an alias for `biochem`. The `biblabel` option is a choice, which is implemented using a csname search. The group here prevents hash table pollution, whilst the xkeyval method is avoided as it is more complex than it is worth!

```
\define@key{acs}{biochemistry}{%
  \setkeys{acs}{biochem = #1}%
}
\define@key{acs}{biblabel}{%
  \acs@ifundefined{acs@biblabel@#1}{%
    \acs@warning{%
      Unknown value `#1' for\MessageBreak biblabel option%
    }%
  }{%
    \acs@activate@biblabel{\@nameuse{acs@biblabel@#1}}%
  }%
}
\newcommand*\acs@activate@biblabel{}
⟨*class⟩
\let\acs@activate@biblabel\AtEndOfClass
\AtEndOfClass{\let\acs@activate@biblabel\@firstofone}
⟨/class⟩
⟨*package⟩
\let\acs@activate@biblabel\AtEndOfPackage
\AtEndOfPackage{\let\acs@activate@biblabel\@firstofone}
⟨/package⟩
```

`\acs@biblabel@brackets` `\acs@biblabel@fullstop` `\acs@biblabel@period` `\acs@biblabel@plain`

The macros to implement the idea above for biblabels.

```
\newcommand*\acs@biblabel@brackets{\def\bibnumfmt##1{(##1)}}
\newcommand*\acs@biblabel@fullstop{\def\bibnumfmt##1{##1.}}
\newcommand*\acs@biblabel@period{\def\bibnumfmt##1{##1.}}
\newcommand*\acs@biblabel@plain{\def\bibnumfmt##1{##1}}
```

Set up some defaults.

```
\setkeys{acs}{
  email = true,
  super = true
}
```

Loading some other packages depends on the options chosen, so they are processed now.

```
\ProcessOptionsX*<acs>
```

\acs@manuscript@communication
\acs@manuscript@letter
\acs@manuscript@note
\acs@manuscript@review
\acs@manuscript@suppinfo

For text comparisons.

```
\newcommand*\acs@manuscript@communication{communication}
\newcommand*\acs@manuscript@letter{letter}
\newcommand*\acs@manuscript@note{note}
\newcommand*\acs@manuscript@review{review}
\newcommand*\acs@manuscript@suppinfo{suppinfo}
```

\acs@niib@create
bibnote
\thebibnote
\bibnote
\bibnotemark
\bibnotetext
\printbibnotes

To avoid needing to load the notes2bib package, especially as the plan is to move that package to LaTeX3 internal syntax, achemso provides a minimal version here. The first step is to create macros which will need a guard against notes2bib already having been loaded. To allow the package and class to behave differently these are actually applied later.

```
\newcommand*\acs@niib@create{%
  \@namedef{ver@notes2bib.sty}{%
    2009/04/20 v1.6a Integrating notes into the bibliography (achemso
    version)
  }%
  \@ifundefined{c@bibnote}{\newcounter{bibnote}}{}
  \def\thebibnote{%
    Note-\the\value{bibnote}%
  }%
  \DeclareRobustCommand*{\bibnote}[1][\thebibnote]{%
    \stepcounter{bibnote}%
    \def\acs@niib@after@text{\cite{##1}}%
    \acs@niib@text{##1}%
  }%
  \DeclareRobustCommand*{\bibnotemark}[1][\thebibnote]{%
    \stepcounter{bibnote}%
    \cite{##1}%
  }%
  \DeclareRobustCommand*{\bibnotetext}[1][\thebibnote]{%
    \let\acs@niib@after@text\relax
    \acs@niib@text{##1}%
  }%
  \newcommand*\printbibnotes{%
    \ifnum\the\value{bibnote}>\z@\relax
      \nocite{achemso-control}%
      \acs@bibliography{acs-\jobname}%
    \fi
  }%
}
```

\acs@niib@after@text

After the text.

```
\newcommand*\acs@niib@after@text{}
```

`\acs@niib@text` The `\acs@niib@text` macro is the outer part of the writing system. It does not absorb the text of note, as without ε-TEX this is bad news. The same file is used for notes and the control entry for the bibliography style.

```
\newcommand*\acs@niib@text{%
  \@bsphack
  \if@filesw
    \expandafter\acs@niib@write
  \else
    \expandafter\acs@niib@no@write
  \fi
}
```

`\acs@niib@write` Writing verbatim without ε-TEX.
`\acs@niib@write@aux@i`
`\acs@niib@write@aux@ii`

```
\newcommand*\acs@niib@write[1]{%
  \begingroup
    \let\do\@makeother
    \dospecials
    \catcode`\{ 1\relax
    \catcode`\} 2\relax
    \acs@niib@write@aux@i{#1}%
}
\newcommand*\acs@niib@write@aux@i[1]{%
  \long\def\@tempa##1{%
      \def\@tempa{##1}%
      \@onelevel@sanitize\@tempa
    \expandafter\endgroup
    \expandafter\def\expandafter\@tempa\expandafter{\@tempa}%
    \acs@niib@write@aux@ii{#1}%
  }%
  \catcode`\^^M 10\relax
  \@tempa
}
\newcommand*\acs@niib@write@aux@ii[1]{%
  \immediate\write\acs@bib@file{%
    @Misc\string{#1,^^J%
    \space\space note = \string{\@tempa\string},^^J%
    \string}^^J%
  }%
  \@esphack
  \acs@niib@after@text
}
```

`\acs@niib@no@write` If no files are to be written, a bit of tidying up.

```
\newcommand\acs@niib@no@write[2]{%
  \@esphack
  \acs@niib@after@text
}
```

`\nmv@natbib@detect` The functionality of notes2bib is combined with the standard `\cite` macro, to
`\acs@nmv@activate` give automatic note-like data in the bibliography.
`\acs@autonote`

```
\AtBeginDocument{
  \def\nmv@natbib@detect{%
    \ifNAT@super
```

```
      \expandafter\acs@nmv@activate
    \else
      \expandafter\acs@autonote
    \fi
  }
}
\newcommand*\acs@nmv@activate{%
  \let\nmv@citex@nat\@citex
  \let\@citex\nmv@citex
  \let\nmv@cite\cite
  \renewcommand*{\cite}[2][]{%
    \nmv@ifmtarg{##1}{%
      \nmv@citetrue
      \nmv@cite{##2}%
    }{%
      \nocite{##2}%
      \bibnote{Ref.~\citenum{##2}, ##1}%
    }%
  }%
}
\newcommand*\acs@autonote{%
  \let\nmv@cite\cite
  \renewcommand*{\cite}[2][]{%
    \nmv@ifmtarg{##1}{%
      \nmv@cite{##2}%
    }{%
      \nocite{##2}%
      \bibnote{Ref.~\citenum{##2}, ##1}%
    }%
  }%
}
```

`\acs@bib@file` `\acs@bib@message` `\acs@bib@name` Some information or creating the control file for BibTeX is set up.

```
\newwrite\acs@bib@file
\newcommand*\acs@bib@message{%
  This is an auxiliary file used by the 'achemso' bundle.^^J%
  This file may safely be deleted. It will be recreated as required.^^J
}
\newcommand*\acs@bib@name{acs-\jobname.bib}
```

`\acs@bib@write` `\acs@bib@write@aux` The control information for BibTeX needs to be written to a special file. The main writing macro is quite simple. Actually writing the information is left to the code for `\bibliography`, so that this only happens if needed.

```
\newcommand*\acs@bib@write{%
  \if@filesw
    \expandafter\acs@bib@write@aux
  \fi
}
\AtBeginDocument{\acs@bib@write}
\newcommand*\acs@bib@write@aux{%
  \immediate\openout\acs@bib@file\acs@bib@name\relax
  \immediate\write\acs@bib@file{\acs@bib@message}%
  \edef\@tempa##1##2{%
    \space\space##1\space = "##2",^^J%
```

```
  }%
  \immediate\write\acs@bib@file{%
    @Control\string{%
      achemso-control,^^J%
      \@tempa{ctrl-article-title\space}{%
        \ifacs@articletitle yes\else no\fi
      }%
      \@tempa{ctrl-chapter-title\space}{%
        \ifacs@chaptertitle yes\else no\fi
      }%
      \@tempa{ctrl-doi\space\space\space\space\space\space\space
        \space\space\space\space}{%
        \ifacs@doi yes\else no\fi
      }%
      \@tempa{ctrl-etal-number\space\space\space}{\acs@maxauthors}%
      \@tempa{ctrl-etal-firstonly}{%
        \ifacs@etal@truncate no\else yes\fi
      }%
    \string}^^J%
  }%
  \immediate\write\@auxout{%
    \string\citation\string{achemso-control\string}%
  }%
  \AtEndDocument{%
    \immediate\closeout\acs@bib@file\relax
  }%
}
```

\acs@bibliography
\bibliography

The \bibliography macro is now patched so that everything works correctly.

```
\AtBeginDocument{%
  \let\acs@bibliography\bibliography
  \def\bibliography#1{%
    \acs@bibliography{acs-\jobname,#1}%
  }%
}
```

\latin

The journal *ACS Nano* formats Latin phrases differently from every other ACS journal: we provide a \latin command to cover this.

```
\AtBeginDocument{
  \providecommand{\latin}[1]{#1}
}
⟨/package | class⟩
```

1.4 Late class-only code

Most of the power of the class is now created. First, a few options are reset so that any given by the user are effectively ignored.

```
⟨*class⟩
\setkeys{acs}{
  abbreviations = false,
  articletitle  = true,
  biblabel      = brackets,
  biochem       = false,
```

```
  doi           = false,
  etalmode      = firstonly,
  keywords      = false,
  maxauthors    = 15,
  super         = true
}
```

When using the class, notes2bib is always emulated. Other standard support packages can now be loaded.

```
\acs@niib@create
\RequirePackage[margin=2.54cm]{geometry}
\RequirePackage{
  caption,
  float,
  graphicx,
  setspace,
  url
}
\ifacs@hyperref
  \expandafter\RequirePackage
\else
  \expandafter\@gobble
\fi
  {hyperref}
\AtBeginDocument{\doublespacing}
```

\title \@title For the meta-data, the REVTEX bundle provides a good model for the commands to give the author. \gdef is used here to avoid any odd grouping issues.

\acs@title@short

```
\renewcommand*{\title}[2][]{%
  \gdef\acs@title@short{#1}%
  \gdef\@title{#2}%
  \ifx\acs@title@short\@empty
    \global\let\acs@title@short\@title
  \fi
}
\@onlypreamble\title
```

\acs@author@cnt \acs@affil@cnt \acs@affil@alt@cnt achemso tracks the number authors, affiliations and alternative affiliations.

```
\newcount\acs@author@cnt
\newcount\acs@affil@cnt
\newcount\acs@affil@alt@cnt
```

\acs@footnote@cnt \acs@affil@marker@cnt Two counts for getting affiliation footnotes correct.

```
\newcount\acs@footnote@cnt
\newcount\acs@affil@marker@cnt
```

\author The author macro stores the current author details and sets the affiliation of the author to the current one. Everything is \global so that there is no possibility of begin trapped inside a group. The affiliation counter is always one behind, and so it is locally incremented to keep the logic of the code clear elsewhere.

```
\def\author#1{%
  \global\advance\acs@author@cnt\@ne\relax
  \expandafter\gdef\csname @author@\@roman\acs@author@cnt\endcsname{#1}%
  \begingroup
```

```
    \advance\acs@affil@cnt\@ne
    \expandafter\xdef\csname @author@affil@\@roman
      \acs@author@cnt\endcsname
      {\the\acs@affil@cnt}%
  \endgroup
}
\@onlypreamble\author
```

\and \thanks Neither \and nor \thanks are used by the document class.

```
\def\and{%
  \acs@warning{%
    \string\and\space not used by the achemso class: please see
    the\MessageBreak package documentation for details%
  }%
}
\def\thanks{%
  \acs@warning{%
    \string\thanks\space not used by the achemso class: please see
    the\MessageBreak the package documentation for details%
  }%
}
```

\affiliation As with \author, everything is \global just in case. The system insists that affiliations come after authors. Before anything is committed, a check is made that the affiliation has not already been seen.

```
\newcommand*\affiliation[2][\relax]{%
  \ifnum\acs@author@cnt>\z@\relax
    \acs@affil@ifdup{#2}{%
      \acs@affil@swap{#2}%
    }{%
      \global\advance\acs@affil@cnt\@ne\relax
      \expandafter\gdef\csname @address@\@roman\acs@affil@cnt\endcsname
        {#2}%
      \ifx\relax#1\relax
        \expandafter\gdef\csname @affil@\@roman\acs@affil@cnt\endcsname
          {#2}%
      \else
        \expandafter\gdef\csname @affil@\@roman\acs@affil@cnt\endcsname
          {#1}%
      \fi
    }%
  \else
    \acs@warning{Affiliation with no author}%
  \fi
}
\@onlypreamble\affiliation
```

\acs@affil@ifdup A short test for two addresses being identical.

\acs@affil@ifdup@aux

```
\newcommand*\acs@affil@ifdup[1]{%
  \begingroup
    \def\@tempa{#1}%
    \@tempswafalse
    \@tempcnta\z@\relax
    \acs@affil@ifdup@aux
```

```
    \if@tempswa
      \aftergroup\@firstoftwo
    \else
      \aftergroup\@secondoftwo
    \fi
  \endgroup
}
\newcommand*\acs@affil@ifdup@aux{%
  \advance\@tempcnta\@ne\relax
  \expandafter\expandafter\expandafter\def\expandafter\expandafter
    \expandafter\@tempb\expandafter\expandafter\expandafter
    {\csname @address@\@roman\@tempcnta\endcsname}%
  \ifx\@tempa\@tempb
    \expandafter\@tempswatrue
  \else
    \ifnum\@tempcnta<\acs@affil@cnt\relax
      \expandafter\expandafter\expandafter\acs@affil@ifdup@aux
    \fi
  \fi
}
```

`\acs@affil@swap` `\acs@affil@swap@aux` If the affiliation has already been given, then all of the authors need to be checked to make sure that the correct affiliation is used. First, the loop from above is used to find the correct number for the duplicate.

```
\newcommand*\acs@affil@swap[1]{%
  \begingroup
    \def\@tempa{#1}%
    \@tempcnta\z@\relax
    \@tempcntb\z@\relax
    \acs@affil@ifdup@aux
    \advance\acs@affil@cnt\@ne\relax
    \acs@affil@swap@aux
  \endgroup
}
\newcommand*\acs@affil@swap@aux{%
  \advance\@tempcntb\@ne\relax
  \expandafter\ifnum\csname @author@affil@\@roman\@tempcntb\endcsname
    = \acs@affil@cnt\relax
    \expandafter\xdef\csname @author@affil@\@roman\@tempcntb\endcsname{%
      \the\@tempcnta
    }%
  \fi
  \ifnum\@tempcntb<\acs@author@cnt\relax
    \expandafter\acs@affil@swap@aux
  \fi
}
```

`\alsoaffiliation` `\acs@alsoaffil@find` To allow complex affiliations , two commands are needed. The first deals with affiliations that are in some way shared by several authors. This is tracked on a per author basis.

```
\newcommand*\alsoaffiliation[2][\relax]{%
  \ifnum\acs@author@cnt>\z@\relax
    \acs@affil@ifdup{#2}{%
      \acs@alsoaffil@find{#2}%
```

```
    }{%
      \global\advance\acs@affil@cnt\@ne\relax
      \@tempcnta\acs@affil@cnt\relax
      \expandafter\gdef\csname @address@\@roman\acs@affil@cnt\endcsname
        {#2}%
      \ifx\relax#1\relax
        \expandafter\gdef\csname @affil@\@roman\acs@affil@cnt\endcsname
          {#2}%
      \else
        \expandafter\gdef\csname @affil@\@roman\acs@affil@cnt\endcsname
          {#1}%
      \fi
    }%
    \@ifundefined{@author@alsoaffil@\@roman\acs@author@cnt}{%
      \expandafter\xdef\csname @author@alsoaffil@\@roman\acs@author@cnt
        \endcsname{\the\@tempcnta}%
    }{%
      \expandafter\xdef\csname @author@alsoaffil@\@roman\acs@author@cnt
        \endcsname{%
        \csname @author@alsoaffil@\@roman\acs@author@cnt\endcsname
        ,\the\@tempcnta
      }%
    }%
  \else
    \acs@warning{Affiliation with no author}%
  \fi
}
\newcommand*\acs@alsoaffil@find[1]{%
  \begingroup
    \def\@tempa{#1}%
    \@tempcnta\z@\relax
    \@tempcntb\z@\relax
    \acs@affil@ifdup@aux
  \expandafter\endgroup
  \expandafter\@tempcnta\the\@tempcnta\relax
}
```

`\altaffiliation` For the alternative affiliation, a second count is kept, and the affiliation is "attached" to the author. The way these are stored means that the appropriate affiliation number can be recovered later, and so printed correctly when things get complex.

```
\newcommand*\altaffiliation[1]{%
  \ifnum\acs@author@cnt>\z@\relax
    \begingroup
      \acs@altaffil@ifdup{#1}{%
        \expandafter\xdef\csname @author@altaffil@\@roman\acs@author@cnt
          \endcsname{\the\@tempcnta}%
      }{%
        \global\advance\acs@affil@alt@cnt\@ne\relax
        \expandafter\gdef\csname @altaffil@\@roman\acs@affil@alt@cnt
          \endcsname{#1}%
        \expandafter\xdef\csname @author@altaffil@\@roman\acs@author@cnt
          \endcsname{\the\acs@affil@alt@cnt}%
      }%
```

```
    \endgroup
  \else
    \acs@warning{Affiliation with no author}%
  \fi
}
\@onlypreamble\altaffiliation
```

\acs@altaffil@ifdup
\acs@altaffil@ifdup@aux

This is very similar to the same routine for normal affiliations but with the appropriate name changes.

```
\newcommand*\acs@altaffil@ifdup[1]{%
  \def\@tempa{#1}%
  \@tempswafalse
  \@tempcnta\z@\relax
  \ifnum\acs@affil@alt@cnt>\z@\relax
    \expandafter\acs@altaffil@ifdup@aux
  \fi
  \if@tempswa
    \expandafter\@firstoftwo
  \else
    \expandafter\@secondoftwo
  \fi
}
\newcommand*\acs@altaffil@ifdup@aux{%
  \advance\@tempcnta\@ne\relax
  \expandafter\expandafter\expandafter\def\expandafter\expandafter
    \expandafter\@tempb\expandafter\expandafter\expandafter
    {\csname @altaffil@\@roman\@tempcnta\endcsname}%
  \ifx\@tempa\@tempb
    \expandafter\@tempswatrue
  \else
    \ifnum\@tempcnta<\acs@affil@alt@cnt\relax
      \expandafter\expandafter\expandafter\acs@altaffil@ifdup@aux
    \fi
  \fi
}
```

\email

E-mail addresses are attached to authors as well.

```
\newcommand*\email[1]{%
  \ifnum\acs@author@cnt>\z@\relax
    \expandafter\gdef\csname @email@\@roman\acs@author@cnt\endcsname
      {#1}%
  \else
    \acs@warning{E-mail with no author}%
  \fi
}
\@onlypreamble\email
```

\fax
\phone

Fax and phone numbers are similar.

```
\newcommand*\fax[1]{%
  \ifnum\acs@author@cnt>\z@\relax
    \expandafter\gdef\csname @fax@\@roman\acs@author@cnt\endcsname
      {#1}%
  \else
    \acs@warning{Fax number with no author}%
```

```
  \fi
}
\@onlypreamble\fax
\newcommand*\phone[1]{%
  \ifnum\acs@author@cnt>\z@\relax
    \expandafter\gdef\csname @phone@\@roman\acs@author@cnt\endcsname
      {#1}%
  \else
    \acs@warning{Phone number with no author}%
  \fi
}
\@onlypreamble\phone
```

\abbreviations
\@abbreviations
\keywords
\@keywords

Some journals use these.

```
\newcommand*\abbreviations[1]{%
  \gdef\@abbreviations{#1}%
}
\newcommand*\@abbreviations{}
\@onlypreamble\abbreviations
\newcommand*\keywords[1]{%
  \gdef\@keywords{#1}%
}
\newcommand*\@keywords{}
\@onlypreamble\keywords
```

\acs@abbreviations@print
\acs@keywords@print
\acs@title@short@print

For printing the key simple meta-data.

```
\newcommand*\acs@abbreviations@print{%
  \ifx\@abbreviations\@empty\else
    \section*{Abbreviations}
    \@abbreviations
    \par
  \fi
}
\newcommand*\acs@keywords@print{%
  \ifx\@keywords\@empty\else
    \section*{Keywords}
    \@keywords
    \par
  \fi
}
\newcommand*\acs@title@short@print{%
  \section*{Running header}
  \acs@title@short
  \par
}
```

\acs@space@pre@title
\acs@space@post@title
\acs@space@post@author
\acs@space@post@address
\acs@space@post@email
\acs@maketitle@width

Lengths for \@maketitle.

```
\newlength\acs@space@pre@title
\setlength\acs@space@pre@title{2em}
\newlength\acs@space@post@title
\setlength\acs@space@post@title{1.5em}
\newlength\acs@space@post@author
\setlength\acs@space@post@author{1em}
\newlength\acs@space@post@address
```

```
\setlength\acs@space@post@address{1em}
\newlength\acs@space@post@email
\setlength\acs@space@post@email{1.5em}
\newlength\acs@maketitle@width
\setlength\acs@maketitle@width{\textwidth}
```

`\affilsize` `\authorsize` `\emailsize` `\titlesize` Some simple size commands.

```
\newcommand*\affilsize{\normalsize}
\newcommand*\authorsize{\large}
\newcommand*\emailsize{\normalsize}
\newcommand*\titlesize{\LARGE}
```

`\authorfont` `\emailfont` `\titlefont` Font settings for `\@maketitle`.

```
\newcommand*\affilfont{\itshape}
\newcommand*\authorfont{\sffamily}
\newcommand*\emailfont{}
\newcommand*\titlefont{\bfseries\sffamily}
```

`\ps@acs` A shortcut to make page styles.

```
\newcommand*{\ps@acs}{}
\let\ps@acs\ps@plain
```

`\@maketitle` `\@maketitle@title@hook` With the changes outlined above in place, a new `\@maketitle` macro is needed. This is partially a copy of the existing, but rather heavily modified.

```
\def\@maketitle{%
  \pagestyle{acs}%
  \ifnum\acs@author@cnt<\z@\relax
    \acs@warning{No authors defined: At least one author is required}%
  \fi
  \newpage
  \null
  \vspace*{\acs@space@pre@title}%
  \begin{center}
    \begin{minipage}{\acs@maketitle@width}
      \begin{center}
        {%
          \titlefont
          \titlesize
          \let\@fnsymbol\acs@author@fnsymbol
          \let\footnote\acs@title@footnote
          \acs@maketitle@suppinfo \@title
          \acs@title@footnote@check
          \global\acs@footnote@cnt\c@footnote
          \@maketitle@title@hook
          \par
        }%
        \vspace*{\acs@space@post@title}%
        {%
          \authorsize
          \authorfont
          \frenchspacing
          \acs@author@list
          \par
        }%
```

```
        \vspace*{\acs@space@post@author}%
        {%
          \affilsize
          \affilfont
          \acs@address@list
          \par
        }%
        \vspace*{\acs@space@post@address}%
        {%
          \emailsize
          \emailfont
          \ifacs@email
            \expandafter\acs@contact@details
          \fi
        }%
        \vspace*{\acs@space@post@email}%
      \end{center}
    \end{minipage}
  \end{center}%
}
\newcommand*\@maketitle@title@hook{}
```

`\acs@maketitle@suppinfo` This is spun out so that it can be avoided if necessary: this is done on the sly.

```
\newcommand*\acs@maketitle@suppinfo{%
  \ifx\acs@manuscript\acs@manuscript@suppinfo
    Supporting Information:\\
  \fi
}
```

`\acs@title@footnote` Footnotes need to be created so that they appear correctly.

`\acs@title@footnote@check`

```
\newcommand*\acs@title@footnote[1]{%
  \footnotemark
  \g@addto@macro\@thanks{\footnotetext{#1}}%
}
\newcommand\acs@title@footnote@check{%
  \ifx\@thanks\@empty
  \else
    \begingroup
      \toks@=\expandafter{\@thanks}%
      \xdef\@thanks{%
        \begingroup
          \let\noexpand\@fnsymbol\noexpand\acs@author@fnsymbol
          \the\toks@
        \endgroup
      }%
    \endgroup
  \fi
}
```

`\acs@contact@details` A general contact details macro.

```
\newcommand*\acs@contact@details{%
  { \sffamily E-mail: \acs@email@list }%
  \acs@number@list
}
```

\@thanks The \@thanks macro is used as a hook to generate the footnotes if needed.

```
\let\@thanks\@empty
```

\acs@author@list Printing the author list needs to do several things. The appropriate separators between authors are created and the author names themselves are printed.

```
\newcommand*\acs@author@list{%
  \@tempcnta\z@\relax
  \ifnum\acs@author@cnt=\z@\relax\else
    \expandafter\acs@author@list@main
  \fi
}
```

\acs@author@footnotes
\acs@author@list@main The main control macro for producing the author list iterates over each author on the list. The result is stored as \acs@author@listing.

```
\newcommand*\acs@author@footnotes{}
\newcommand*\acs@author@list@main{%
  \advance\@tempcnta\@ne\relax
  \def\acs@author@footnotes{}%
  \acs@author@list@and
  \space
  \@nameuse{@author@\@roman\@tempcnta}%
  \acs@author@list@comma
  \acs@author@star
  \acs@author@affil
  \acs@author@affil@also
  \acs@author@affil@alt
  \ifx\@empty\acs@author@footnotes\else
    \textsuperscript{\acs@author@footnotes}%
  \fi
  \ifnum\@tempcnta<\acs@author@cnt\relax
    \expandafter\acs@author@list@main
  \fi
}
```

\acs@author@list@and
\acs@author@list@comma Simple checks to add an "and" and a comma.

```
\newcommand*\acs@author@list@and{%
  \ifnum\acs@author@cnt=\@ne\relax\else
    \ifnum\@tempcnta=\acs@author@cnt\relax
      \space and%
    \fi
  \fi
}
\newcommand*\acs@author@list@comma{%
  \ifnum\acs@author@cnt>\tw@\relax
    \ifnum\@tempcnta<\acs@author@cnt\relax
      ,%
    \fi
  \fi
}
```

\acs@author@star
\acs@author@star@aux A check for an e-mail for an author: if so, add a star.

```
\newcommand*\acs@author@star{%
  \acs@ifundefined{@email@\@roman\@tempcnta}{}{%
```

```
    \acs@author@star@aux
  }%
}
\newcommand*\acs@author@star@aux{%
  \protected@edef\acs@author@footnotes{%
    \acs@author@fnsymbol{\z@}%
    \ifnum\acs@affil@cnt>\@ne\relax
      ,%
    \else
      \ifnum\acs@affil@alt@cnt>\z@\relax
        ,%
      \fi
    \fi
  }%
}
```

`\acs@author@affil` `\acs@author@affil@aux` The main affiliation of the author is checked for, and assuming one is found the appropriate symbol is added to the list.

```
\newcommand*\acs@author@affil{%
  \acs@ifundefined{%
    @affil@\@roman\csname @author@affil@\@roman\@tempcnta\endcsname
  }{%
    \acs@warning{%
      No affiliation given for author\MessageBreak
      \@nameuse{@author@\@roman\@tempcnta}%
    }%
  }{%
    \acs@author@affil@aux
  }%
}
\newcommand*\acs@author@affil@aux{%
  \ifnum\acs@affil@cnt>\@ne\relax
    \expandafter\acs@affil@marker@cnt\csname @author@affil@\@roman
      \@tempcnta\endcsname\relax
    \advance\acs@affil@marker@cnt\acs@footnote@cnt\relax
    \protected@edef\acs@author@footnotes{%
      \acs@author@footnotes
      \acs@author@fnsymbol{\acs@affil@marker@cnt}%
    }%
  \else
    \ifnum\acs@affil@alt@cnt>\z@\relax
      \acs@affil@marker@cnt\@ne\relax
      \advance\acs@affil@marker@cnt\acs@footnote@cnt\relax
      \protected@edef\acs@author@footnotes{%
        \acs@author@footnotes
        \acs@author@fnsymbol{\acs@affil@marker@cnt}%
      }%
    \fi
  \fi
}
```

`\acs@author@affil@also` `\acs@author@affil@also@aux` The "also" affiliations are generated by a loop as there may be more than one.

```
\newcommand*\acs@author@affil@also{%
  \acs@ifundefined{@author@alsoaffil@\@roman\@tempcnta}{}{%
```

```
    \acs@author@affil@also@aux
  }%
}
\newcommand*\acs@author@affil@also@aux{%
  \expandafter\@for\expandafter\@tempa\expandafter:\expandafter
    =\csname @author@alsoaffil@\@roman\@tempcnta\endcsname\do{%
    \acs@affil@marker@cnt\@tempa\relax
    \advance\acs@affil@marker@cnt\acs@footnote@cnt\relax
    \protected@edef\acs@author@footnotes{%
      \acs@author@footnotes
      ,%
      \acs@author@fnsymbol{\acs@affil@marker@cnt}%
    }%
  }%
}
```

\acs@author@affil@alt
\acs@author@affil@alt@aux

Alternative affiliations get the correct affiliation number back out from the stored data. There are then two corrections: one for the total number of main affiliations and a second in case there is a footnote to the title.

```
\newcommand*\acs@author@affil@alt{%
  \acs@ifundefined{@author@altaffil@\@roman\@tempcnta}{}{%
    \acs@author@affil@alt@aux
  }%
}
\newcommand*\acs@author@affil@alt@aux{%
  \expandafter\acs@affil@marker@cnt
    \csname @author@altaffil@\@roman\@tempcnta\endcsname\relax
  \advance\acs@affil@marker@cnt\acs@affil@cnt\relax
  \advance\acs@affil@marker@cnt\acs@footnote@cnt\relax
  \protected@edef\acs@author@footnotes{%
    \acs@author@footnotes
    ,%
    \acs@author@fnsymbol{\acs@affil@marker@cnt}%
  }%
}
```

\acs@author@fnsymbol
\acs@author@fnsymbol@aux
\acs@author@fnsymbol@loop
acs@author@fnsymbol@loop@aux@i
cs@author@fnsymbol@loop@aux@ii
acs@author@fnsymbol@loop@aux@m
acs@author@fnsymbol@loop@aux@Q
\acs@author@fnsymbol@symbol

The ACS have an extended list of symbols. The star appears at the special position zero.

```
\newcommand*{\acs@author@fnsymbol}[1]{%
  \ensuremath{%
    \expandafter\acs@author@fnsymbol@aux\expandafter{\number#1 }%
  }%
}
\newcommand*{\acs@author@fnsymbol@aux}[1]{%
  \ifnum#1>10 %
    \expandafter\acs@author@fnsymbol@loop
  \else
    \expandafter\acs@author@fnsymbol@symbol
  \fi
    {#1}%
}
\newcommand*{\acs@author@fnsymbol@loop}[1]{%
   \acs@author@fnsymbol@loop@aux@i#1%
}
```

```
\newcommand*{\acs@author@fnsymbol@loop@aux@i}[2]{%
  \acs@author@fnsymbol@symbol{\ifnum#2=0 10\else #2\fi}%
  \expandafter\acs@author@fnsymbol@loop@aux@ii\romannumeral #1000Q{}%
    {\acs@author@fnsymbol@symbol{\ifnum#2=0 10\else #2\fi}}%
}
\newcommand*{\acs@author@fnsymbol@loop@aux@ii}[1]{%
  \@nameuse{acs@author@fnsymbol@loop@aux@#1}%
}
\def\acs@author@fnsymbol@loop@aux@m#1Q#2#3{%
  \acs@author@fnsymbol@loop@aux@ii#1Q{#2#3}{#3}%
}
\newcommand*{\acs@author@fnsymbol@loop@aux@Q}[2]{#1}
\newcommand*{\acs@author@fnsymbol@symbol}[1]{%
  \ifcase #1 *\or
    \dagger\or
      \ddagger\or
        \P\or
          \S\or
            \|\or
              \bot\or
                \#\or
                  @\or
                    \triangle\or
                      \nabla
    \fi
}
```

`\acs@address@list` `\acs@address@list@auxi` `\acs@address@list@auxii`

Loop over the addresses and any extra affiliations and print them all: if there is only one, omit the marker entirely. There is also a need to watch out for any footnotes from the title.

```
\newcommand*\acs@address@list{%
  \ifnum\acs@affil@cnt>\z@
    \expandafter\acs@address@list@auxi
  \else
    \acs@warning{No affiliations: at least one affiliation is needed}%
  \fi
}
\newcommand*\acs@address@list@auxi{%
  \ifnum0%
    \ifnum\acs@affil@cnt>\@ne    1\fi
    \ifnum\acs@affil@alt@cnt>\z@ 1\fi
      >\z@
    \expandafter\acs@address@list@auxii
  \else
    \@address@i\par
  \fi
}
\newcommand*\acs@address@list@auxii{%
  \@tempcnta\z@
  \acs@affil@marker@cnt\acs@footnote@cnt
  \loop\ifnum\@tempcnta<\acs@affil@cnt
    \advance\@tempcnta\@ne
    \advance\acs@affil@marker@cnt\@ne
    \acs@author@fnsymbol{\acs@affil@marker@cnt}%
```

```
    \@nameuse{@address@\@roman\@tempcnta}\par
  \repeat
  \@tempcnta\z@
  \loop\ifnum\@tempcnta<\acs@affil@cnt
    \advance\@tempcnta\@ne
    \advance\acs@affil@marker@cnt\@ne
    \acs@ifundefined{@altaffil@\@roman\@tempcnta}
      {}
      {%
        \acs@author@fnsymbol{\acs@affil@marker@cnt}%
        \@nameuse{@altaffil@\@roman\@tempcnta}\par
      }%
  \repeat
}
```

\acs@fnsymbol@org
\acs@affil@list
\acs@affil@list@aux

Footnotes are done in two stages. First the main affiliation is handled, then the possible alternative. There is a need to check for the possibility that there is only one main affiliation but one or more alternative ones.

```
\newcommand*\acs@fnsymbol@org{}
\newcommand*\acs@affil@list{%
  \let\acs@fnsymbol@org\@fnsymbol
  \let\@fnsymbol\acs@author@fnsymbol
  \@tempcnta\z@\relax
  \@tempcntb\z@\relax
  \ifnum\acs@affil@cnt>\@ne\relax
    \expandafter\acs@affil@list@aux
  \else
    \ifnum\acs@affil@alt@cnt>\z@\relax
      \acs@affil@marker@cnt\@ne\relax
      \advance\acs@affil@marker@cnt\acs@footnote@cnt\relax
      \footnotetext[\acs@affil@marker@cnt]{\@affil@i}%
      \@tempcnta\@ne\relax
    \fi
  \fi
  \ifnum\acs@affil@alt@cnt>\z@\relax
    \expandafter\acs@affil@alt@list
  \fi
  \let\@fnsymbol\acs@fnsymbol@org
}
\newcommand*\acs@affil@list@aux{%
  \advance\@tempcnta\@ne\relax
  \acs@affil@marker@cnt\@tempcnta\relax
  \advance\acs@affil@marker@cnt\acs@footnote@cnt\relax
  \footnotetext[\acs@affil@marker@cnt]{%
    \@nameuse{@affil@\@roman\@tempcnta}%
  }%
  \ifnum\@tempcnta<\acs@affil@cnt\relax
    \expandafter\acs@affil@list@aux
  \fi
}
```

\acs@affil@alt@list
\acs@affil@alt@lista@aux

The secondary loop for alternative affiliations is similar.

```
\newcommand*\acs@affil@alt@list{%
  \advance\@tempcntb\@ne\relax
```

```
  \acs@ifundefined{@altaffil@\@roman\@tempcntb}{}{%
    \acs@altaffil@foot@aux
  }
  \ifnum\@tempcntb<\acs@author@cnt\relax
    \expandafter\acs@affil@alt@list
  \fi
}
\newcommand*\acs@altaffil@foot@aux{%
  \advance\@tempcnta\@ne\relax
  \acs@affil@marker@cnt\@tempcnta\relax
  \advance\acs@affil@marker@cnt\acs@footnote@cnt\relax
  \footnotetext[\acs@affil@marker@cnt]{%
    \@nameuse{@altaffil@\@roman\@tempcntb}%
  }%
}
```

\acs@email@list@font
\acs@email@list
\acs@email@list@aux

The final piece of meta-data to print is the e-mail address list. The total number of e-mail addresses given it counted in \@tempcntb, which means a warning can be given if there are none. The group is used so that \UrlFont can be set correctly.

```
\newcommand*\acs@email@list@font{\sf}
\newcommand*\acs@email@list{%
  \begingroup
    \def\UrlFont{\acs@email@list@font}%
    \@tempcnta\z@\relax
    \@tempcntb\z@\relax
    \acs@email@list@aux
    \ifnum\@tempcntb=\z@\relax
      \acs@warning{%
        No e-mail given:\MessageBreak
        at lest one author must have a contact e-mail%
      }%
    \fi
  \endgroup
}
\newcommand*\acs@email@list@aux{%
  \advance\@tempcnta\@ne\relax
  \ifnum\@tempcnta>\acs@author@cnt\relax\else
    \acs@ifundefined{@email@\@roman\@tempcnta}{}{%
      \advance\@tempcntb\@ne\relax
      \ifnum\@tempcntb>\@ne\relax
        ;
      \fi
      \expandafter\expandafter\expandafter\url\expandafter
        \expandafter\expandafter{%
            \csname @email@\@roman\@tempcnta\endcsname
      }%
    }%
    \expandafter\acs@email@list@aux
  \fi
}
```

\acs@number@list
\acs@number@list@aux@i
\acs@number@list@aux@ii

Listing phone and fax numbers is easier as they don't have to be given. Everything is done in one block so that it is possible to know whether to add a new line and

also to keep everything together.

```
\newcommand*\acs@number@list{%
  \begingroup
    \acs@number@list@aux@i{phone}%
    \let\@tempb\@tempa
    \acs@number@list@aux@i{fax}%
    \ifx\@tempa\@empty
      \let\@tempa\@tempb
    \else
      \ifx\@tempb\@empty\else
        \protected@edef\@tempa{%
          \@tempb.\space\@tempa
        }%
      \fi
    \fi
    \ifx\@tempa\@empty\else
      \par
      \@tempa
    \fi
  \endgroup
}
\newcommand*\acs@number@list@aux@i[1]{%
  \def\@tempa{}%
  \@tempcnta\z@\relax
  \def\acs@number@list@aux@ii{%
    \advance\@tempcnta\@ne\relax
    \ifnum\@tempcnta>\acs@author@cnt\relax\else
      \acs@ifundefined{@#1@\@roman\@tempcnta}{}{%
        \acs@ifundefined{@email@\@roman\@tempcnta}{}{%
          \ifx\@tempa\@empty
            \edef\@tempa{%
              \@nameuse{@#1@\@roman\@tempcnta}%
            }%
          \else
            \edef\@tempa{%
              \@tempa
              ;
              \@nameuse{@#1@\@roman\@tempcnta}%
            }%
          \fi
        }%
      }%
      \expandafter\acs@number@list@aux@ii
    \fi
  }%
  \acs@number@list@aux@ii
  \ifx\@tempa\@empty\else
    \protected@edef\@tempa{%
      \MakeUppercase#1: \@tempa
    }%
  \fi
}
\newcommand*\acs@number@list@aux@ii{}
```

\endabstract
\acs@abstract@extras
```
\g@addto@macro\endabstract{%
  \aftergroup\acs@abstract@extras
}
\newcommand*{\acs@abstract@extras}{%
  \ifacs@abbreviations
    \acs@abbreviations@print
    \par
  \fi
  \ifacs@keywords
    \acs@keywords@print
    \par
  \fi
}
```

\acs@maketitle@extras
\acs@maketitle@extras@hook
A couple of things might need to be added to \maketitle.

```
\newcommand*\acs@maketitle@extras{%
  \acs@maketitle@extras@hook
}
\newcommand*\acs@maketitle@extras@hook{}
\g@addto@macro{\maketitle}{\acs@maketitle@extras}
```

\maketitle is required by the document class, and must start the document. No variation is allowed, and so it is done automatically.

```
\g@addto@macro{\document}{\maketitle}
```

scheme (*env.*)
chart (*env.*)
graph (*env.*)
Three new float types are provided, scheme, chart and graph. These are the most obvious types; for graphs, a slight problem arises with the file extension.

```
\newfloat{scheme}{htbp}{los}
\floatname{scheme}{Scheme}
\newfloat{chart}{htbp}{loc}
\floatname{chart}{Chart}
\newfloat{graph}{htbp}{loh}
\floatname{graph}{Graph}
```

\schemename
\chartname
\graphname
Naming is set up in the same way as the kernel floats.

```
\newcommand*\schemename{Scheme}
\newcommand*\chartname{Chart}
\newcommand*\graphname{Graph}
```

The standard floats should appear "here" by default.

```
\floatplacement{table}{htbp}
\floatplacement{figure}{htbp}
\floatstyle{plaintop}
\restylefloat{table}
```

\acs@floatboxreset
Floats are all centred.

```
\let\acs@floatboxreset\@floatboxreset
\def\@floatboxreset{%
  \centering
  \acs@floatboxreset
}
```

\plainref For legacy support.
\ref
```
\newcommand*\plainref{}
\AtBeginDocument{\let\plainref\ref}
```

\acs@section Both the numbering and existence of section headers may need to be altered.
\acs@subsection Some generic functions are therefore provided to deal with this cleanly. First,
\acs@subsubsection some original definitions are saved.
\acs@startsection@orig
```
\newcommand*\acs@section{}
\let\acs@section\section
\newcommand*\acs@subsection{}
\let\acs@subsection\subsection
\newcommand*\acs@subsubsection{}
\let\acs@subsubsection\subsubsection
\newcommand*\acs@startsection@orig{}
\let\acs@startsection@orig\@startsection
```

\acs@startsection A version of \@startsection which adds unnumbered sections to the TOC: modelled on amsart. This is active as standard.
```
\newcommand\acs@startsection[6]{%
 \if@noskipsec \leavevmode \fi
 \par \@tempskipa #4\relax
 \@afterindenttrue
 \ifdim \@tempskipa <\z@ \@tempskipa -\@tempskipa \@afterindentfalse\fi
 \if@nobreak \everypar{}\else
     \addpenalty\@secpenalty\addvspace\@tempskipa\fi
 \@ifstar{\@dblarg{\@sect{#1}{\@m}{#3}{#4}{#5}{#6}}}%
         {\@dblarg{\@sect{#1}{#2}{#3}{#4}{#5}{#6}}}%
}
\let\@startsection\acs@startsection
```

\acs@startsection@alt An alternative version of \@startsection which never adds numbers.
```
\newcommand*\acs@startsection@alt[6]{%
  \if@noskipsec \leavevmode \fi
  \par \@tempskipa #4\relax
  \@afterindenttrue
 \ifdim \@tempskipa <\z@ \@tempskipa -\@tempskipa \@afterindentfalse\fi
 \if@nobreak \everypar{}\else
     \addpenalty\@secpenalty\addvspace\@tempskipa\fi
  \@ifstar{\@ssect{#3}{#4}{#5}{#6}}
          {\@ssect{#3}{#4}{#5}{#6}}%
}
```

\acs@sections@none When removing sections entirely, a gobble macro is needed.
\acs@sections@none@aux
```
\newcommand*\acs@sections@none{%
  \@ifstar{%
    \acs@sections@none@aux
  }{%
    \acs@sections@none@aux
  }%
}
\newcommand*\acs@sections@none@aux[2][]{%
  \acs@warning{%
    (Sub)section ‘#2’ ignored%
```

```
  }%
}
```

`\SectionNumbersOff` `\SectionNumbersOn` To macros to add or remove the section numbers. The standard setting for the class has them on, but some configurations will turn them off. The names of these functions are both in design space so that users can change the decision easily.

```
\newcommand*\SectionNumbersOff{%
  \let\@startsection\acs@startsection@alt
}
\@onlypreamble\SectionNumbersOff
\newcommand*\SectionNumbersOn{%
  \let\@startsection\acs@startsection
}
\@onlypreamble\SectionNumbersOn
```

`\SectionsOff` `\SectionsOn` Quite similar for entire sections.

```
\newcommand*\SectionsOff{%
  \let\section\acs@sections@none
  \let\subsection\acs@sections@none
  \let\subsubsection\acs@sections@none
}
\@onlypreamble\SectionsOff
\newcommand*\SectionsOn{%
  \let\section\acs@section
  \let\subsection\acs@subsection
  \let\subsubsection\acs@subsubsection
}
\@onlypreamble\SectionsOn
```

`\tableofcontents` Never print TOC in itself.

```
\begingroup
  \toks@=\expandafter{\tableofcontents}
  \xdef\tableofcontents{%
    \begingroup
      \let\noexpand\@startsection\noexpand\acs@startsection@orig
      \the\toks@
    \endgroup
  }
\endgroup
```

`acknowledgement` (*env.*) `suppinfo` (*env.*) Simple named sections.

```
\newenvironment{acknowledgement}{%
  \acs@section*{\acknowledgementname}%
}{}
\newenvironment{suppinfo}{%
  \acs@section*{\suppinfoname}%
}{}
```

`\acknowledgementname` `\bibsection` `\suppinfoname` A few macros need to get around the changes.

```
\newcommand*\acknowledgementname{Acknowledgement}
\AtEndOfClass{%
  \def\bibsection{%
```

```
    \acs@section*{\refname}%
  }%
}
\newcommand*\suppinfoname{Supporting Information Available}
```

\acs@abstract
\acs@endabstract
\acs@abstract@start
\acs@abstract@end
\acs@abstract@iffalse

Removing the abstract, if necessary, is done using a trick from the comment package. However, it code is copied here to keep requirements down.

```
\newcommand*\acs@abstract{}
\let\acs@abstract\abstract
\newcommand*\acs@endabstract{}
\let\acs@endabstract\endabstract
\begingroup
  \catcode`{ \active
  \catcode`} 12\relax
  \catcode`( 1\relax
  \catcode`) 2\relax
  \gdef\acs@abstract@start(%
    \acs@warning(%
      Abstract not allowed for this\MessageBreak
       manuscript type
    )%
    \@bsphack
    \catcode`{ \active
    \catcode`} 12\relax
    \let\end\fi
    \let{\acs@abstract@end% }
    \iffalse
  )%{
  \gdef\acs@abstract@end#1}(%
    \def\@tempa(#1)%
    \ifx\@tempa\@currenvir
      \@Esphack\endgroup
      \if@ignore
        \global\@ignorefalse
        \ignorespaces
      \fi
    \else
       \expandafter\acs@abstract@iffalse
    \fi
  )
\endgroup
\newcommand*\acs@iffalse{\iffalse}
```

\AbstractOff
\AbstractOn

A very similar pattern to before.

```
\newcommand*\AbstractOff{%
  \let\abstract\acs@abstract@start
  \let\endabstract\acs@abstract@end
}
\@onlypreamble\AbstractOff
\newcommand*\AbstractOn{%
  \let\abstract\acs@abstract
  \let\endabstract\acs@endabstract
}
\@onlypreamble\AbstractOn
```

\acs@collect@toks
\acs@collect@content
\acs@collect@content

The content of the graphic TOC entry is processed using a method from amsmath *via* environ. The entire environment is gathered for typesetting in a box. First, some storage is needed.

```
\newtoks\acs@collect@toks
\newtoks\acs@collect@empty@toks
\newcommand*\acs@collect@begins{}
\newcommand*\acs@collect@content{}
```

\acs@collect
\acs@collect@aux
\acs@collect@begins@
\acs@collect@body

This is a \long version of \collect@body.

```
\newcommand\acs@collect[1]{%
  \acs@collect@toks{%
    \expandafter#1\expandafter{\the\acs@collect@toks}%
  }%
  \edef\acs@collect@content{%
    \the\acs@collect@toks
    \noexpand\end{\@currenvir}%
  }%
  \acs@collect@toks\acs@collect@empty@toks
  \def\acs@collect@begins{b}%
  \begingroup
    \expandafter\let\csname\@currenvir\endcsname\acs@collect@aux
    \edef\acs@collect@content{%
      \expandafter\noexpand\csname\@currenvir\endcsname
    }%
    \acs@collect@content
}
\newcommand*\acs@collect@aux{}
\long\def\acs@collect@aux#1\end#2{%
  \edef\acs@collect@begins{%
    \acs@collect@begins@#1\begin\end
    \expandafter\@gobble\acs@collect@begins
  }%
  \ifx\@empty\acs@collect@begins
    \endgroup
    \@checkend{#2}%
    \acs@collect@body{#1}%
  \else
    \acs@collect@body{#1\end{#2}}%
  \fi
  \acs@collect@content
}
\newcommand*\acs@collect@begins@{}
\long\def\acs@collect@begins@#1\begin#2{%
  \ifx\end#2\else
    b\expandafter\acs@collect@begins@
  \fi
}
\newcommand\acs@collect@body[1]{%
  \global\acs@collect@toks\expandafter{\the\acs@collect@toks#1}%
}
```

\acs@abstract@print

Delayed abstract printing works in a similar way, but with some formatting 'built-in'.

```
\newcommand\acs@abstract@print[1]{%
  \global\long\def\acs@abstract@text{%
    \if@twocolumn
      \@restonecoltrue\onecolumn
    \else
      \@restonecolfalse\newpage
    \fi
    \acs@section*{Abstract}%
    #1%
    \if@restonecol
      \twocolumn
    \else
      \newpage
    \fi
  }%
  \AtEndDocument{\acs@abstract@text}%
}
```

\acs@tocentry@print
\acs@tocentry@print@aux
\acs@tocentry@text

The same approach is taken for the graphical table of content printing. This is done in a box so that everything has a frame around it.

```
\newcommand{\acs@tocentry@print}[1]{%
  \gdef\acs@tocentry@text{\normalsize#1}%
  \AtEndDocument{%
    \if@twocolumn
      \@restonecoltrue\onecolumn
    \else
      \@restonecolfalse\newpage
    \fi
    \acs@tocentry@print@aux
    \if@restonecol
      \twocolumn
    \else
      \newpage
    \fi
  }%
}
\newcommand*{\acs@tocentry@print@aux}{%
  \begingroup
    \let\@startsection\acs@startsection@orig
    \acs@section*{\tocentryname}%
    \tocsize
    \sffamily
    \singlespacing
    \begin{center}
      \fbox
        {%
          \begin{minipage}{\acs@tocentry@width}
            \vbox to \acs@tocentry@height{\acs@tocentry@text}%
          \end{minipage}%
        }%
    \end{center}%
  \endgroup
}
\newcommand*\acs@tocentry@text{TOC ENTRY REQUIRED}
```

```
\newlength{\acs@tocentry@height}
\newlength{\acs@tocentry@width}
\setlength{\acs@tocentry@height}{1.75in}
\setlength{\acs@tocentry@width}{3.25in}
```

`tocentry` (*env.*) Actually creating the entry is pretty easy.

```
\newenvironment{tocentry}{\acs@collect\acs@tocentry@print}{}
```

`\tocentryname` A simple name macro.

```
\newcommand*\tocentryname{TOC Graphic}
```

`\tocsize` The font size for printing the TOC entry.

```
\newcommand*\tocsize{%
  \@setfontsize\tocsize\@viiipt\@ixpt
}
```

`\acs@type@list` `\acs@type@default` `\acs@type@check` Different journals allow different types of article. A list is set up here: different journals can then alter it. A check function is also provided along with a default.

```
\newcommand*\acs@type@list{article,communication,suppinfo}
\newcommand*\acs@type@default{article}
\newcommand*\acs@type@check{%
  \@tempswafalse
  \@for\@tempa:=\acs@type@list\do{%
    \ifx\@tempa\acs@manuscript
      \expandafter\@tempswatrue
    \fi
  }%
  \if@tempswa\else
    \acs@warning{%
      Invalid manuscript type \acs@manuscript:\MessageBreak
      changed to default type \acs@type@default
    }%
    \let\acs@manuscript\acs@type@default
  \fi
}
```

A few bits for older versions.

```
\newcommand*\acs@setkeys{\setkeys{acs}}
\let\acs@killabstract\AbstractOff
\let\acs@killsecs\SectionsOff
\newcommand*\acs@validtype[2][article]{%
  \def\acs@type@default{#1}%
  \def\acs@type@list{#2}%
}
```

`\acs@par` A saved paragraph.

```
\newcommand*\acs@par{}
\let\acs@par\par
```

`\acs@layout@shared` `acknowledgement` (*env.*) `suppinfo` (*env.*) Some code is used generally when setting up "press ready" layouts. There is quite a bit here, mainly layout related.

```
\newcommand*\acs@layout@shared{%
  \AtBeginDocument{\singlespacing}%
```

```
  \twocolumn
  \tolerance=2000\relax
  \emergencystretch=10pt\relax
  \geometry{
    letterpaper,
    top    = 12.7mm,
    bottom = 16.8mm,
    left   = 19.3mm,
    right  = 19.3mm
  }%
  \setlength{\columnsep}{8.1mm}%
  \setlength{\parindent}{3.3mm}%
  \renewenvironment{acknowledgement}{%
    \def\@tempa{acknowledgement}%
    \ifx\@currenvir\@tempa
      \let\par\relax
      \acksize
      \vspace{6pt}%
      \textbf{\acknowledgementname}%
    \else
      \acs@section*{\acknowledgementname}%
    \fi
  }{%
    \acs@par
  }%
}
```

`\acksize` `\suppsize` More sizes.

```
\newcommand*\acksize{\normalsize}
\newcommand*\suppsize{\normalsize}
```

`\acs@layout@nine` `\@xipt` `\acs@layout@ten` The class loads twelve point text. To reset it for print layouts, it is easiest to do things directly.

```
\newcommand*\acs@layout@nine{%
  \def\@xipt{11}%
  \long\def\normalsize{%
    \@setfontsize\normalsize\@ixpt\@xipt
  }%
  \normalsize
  \let\@listi\@listI
  \abovedisplayskip 5\p@ \@plus2\p@ \@minus 5\p@\relax
  \abovedisplayshortskip \z@ \@plus3\p@\relax
  \belowdisplayshortskip 3\p@ \@plus3\p@ \@minus 3\p@\relax
  \belowdisplayskip\abovedisplayskip\relax
  \abovecaptionskip 5\p@\relax
  \intextsep 7\p@ \@plus 2\p@ \@minus 2\p@\relax
}
\newcommand*\acs@layout@ten{%
  \long\def\normalsize{%
    \@setfontsize\normalsize\@xpt\@xiipt
  }%
  \normalsize
  \@setfontsize\normalsize\@xpt\@xiipt
  \let\@listi\@listI
```

```
  \abovedisplayskip 10\p@ \@plus2\p@ \@minus5\p@\relax
  \abovedisplayshortskip \z@ \@plus3\p@\relax
  \belowdisplayshortskip 6\p@ \@plus3\p@ \@minus3\p@\relax
  \belowdisplayskip \abovedisplayskip\relax
}
```

With all of the standard settings done, the journal configuration can be loaded.

```
\InputIfFileExists{achemso-\acs@journal.cfg}{}{%
  \acs@warning{%
    Unknown journal `\acs@journal':\MessageBreak
    using default configuration JACSAT%
  }%
  \input{achemso-jacsat.cfg}%
}
```

Suppress spurious warnings.

```
\let\@unusedoptionlist\@empty
```

`\thepage` Some changes that can always be applied if the manuscript type is appropriate: this saves some repetition in the configuration files.

```
\acs@type@check
\ifx\acs@manuscript\acs@manuscript@note
  \SectionsOff
\fi
\ifx\acs@manuscript\acs@manuscript@review
  \SectionsOn
  \SectionNumbersOn
\fi
\ifx\acs@manuscript\acs@manuscript@suppinfo
  \setkeys{acs}{maxauthors = 0}
  \def\thepage{S-\arabic{page}}
  \renewcommand*\thefigure{S\@arabic\c@figure}
  \renewcommand*\thescheme{S\@arabic\c@scheme}
  \renewcommand*\thetable{S\@arabic\c@table}
  \AtBeginDocument
    {%
      \renewcommand*\citenumfont[1]{S#1}%
      \renewcommand*\bibnumfmt[1]{(S#1)}%
    }
\fi
```

Set up two column layout.

```
\begingroup
  \def\@tempa{twocolumn}
  \ifx\acs@layout\@tempa
    \aftergroup\acs@layout@shared
  \fi
  \def\@tempa{two-column}
  \ifx\acs@layout\@tempa
    \aftergroup\acs@layout@shared
  \fi
\endgroup
⟨/class⟩
```

1.5 Late shared code

\citenumfont Changes to citations can now be made. The citation styles supplied here require natbib, which is loaded with the appropriate options. This part applies to the package as well as the class: it is here so that the load order is correct.

```
⟨*class | package⟩
\ifacs@super
  \RequirePackage[sort&compress,numbers,super]{natbib}
\else
  \RequirePackage[sort&compress,numbers,round]{natbib}
  \def\citenumfont{\textit}
\fi
\define@key{acs}{super}[true]{%
  \def\@tempa{#1}%
  \def\@tempb{true}%
  \ifx\@tempa\@tempb
    \setcitestyle{super,open={},close={}}%
    \renewcommand*\citenumfont{}%
  \else
    \setcitestyle{round}%
    \renewcommand*\citenumfont{\textit}
  \fi
}
\RequirePackage{natmove}
```

The mciteplus package allows the construction of lists of references with sub-letters. However, it might not be available, and so it is only loaded if available: the `.bst` files should work either way. There is also a patch to get cross-references correct with the modified `\ref` macro used here. The reason for ensuring that `\@mciteNatbibCiteCmdList` is defined is that it allows for the case where people prevent mciteplus being loaded using `\ver@mciteplus.sty`.

```
\IfFileExists{mciteplus.sty}{%
  \RequirePackage{mciteplus}
  \providecommand*{\@mciteNatbibCiteCmdList}{}%
  \edef\@tempa{\noexpand\in@{citenum}{\@mciteNatbibCiteCmdList}}%
  \@tempa
  \ifin@
  \else
    \edef\@mciteNatbibCiteCmdList{\@mciteNatbibCiteCmdList,citenum}%
  \fi
⟨*!package⟩
  \def\@mciteSubRef[##1]##2{\plainref{\@mcitereflabelprefix:##1:##2}}
⟨/!package⟩
}{}
```

\acs@bibstyle The next step is to sort out bibliography formatting. With both the package and the class, the bibliography style is determined without user intervention. The style is stored as it may need to be altered later.

```
\newcommand*\acs@bibstyle{achemso}
\ifacs@biochem
  \def\acs@bibstyle{biochem}
  \bibliographystyle{biochem}
\else
```

```
  \bibliographystyle{achemso}
\fi
```

\acs@bibliographystyle
\bibliographystyle

The original \bibliographystyle macro is now disabled: the underlying command is repeated otherwise problems cop up with chapterbib.

```
\newcommand*\acs@bibliographystyle{}
\let\acs@bibliographystyle\bibliographystyle
\def\bibliographystyle#1{%
  \acs@warning{\string\bibliographystyle\space ignored}%
  \expandafter\acs@bibliographystyle\expandafter{\acs@bibstyle}%
}
```

⟨/class | package⟩

1.6 Late package-only code

The notes2bib code may or may not be activated.

```
⟨*package⟩
\AtBeginDocument{%
  \@ifpackageloaded{notes2bib}{}{%
    \acs@niib@create
  }%
}
⟨/package⟩
```

1.7 Moving citations with natbib

The code for moving citations is created as a separate package, as the code needed is the same in both cases.

```
⟨*natmove⟩
\ProvidesPackage{natmove}
  [2010/01/15 v1.1a Automatic citation moving with natbib]
\RequirePackage{natbib}
```

\nmv@ifmtarg
\nmv@xifmtarg

To keep down dependence on other packages, the very short code block from ifmtarg is copied here with an internal name.

```
\newcommand*\nmv@ifmtarg{}
\newcommand*\nmv@xifmtarg{}
\begingroup
  \catcode`\Q 3\relax
  \long\gdef\nmv@ifmtarg#1{%
    \nmv@xifmtarg#1QQ\@secondoftwo\@firstoftwo\@nil
  }
  \long\gdef\nmv@xifmtarg#1#2Q#3#4#5\@nil{#4}
\endgroup
```

\ifnmv@cite

A flag is need to watch whether \cite or another macro is in use.

```
\newif\ifnmv@cite
```

\nmv@citex

Using the flag, either the new internal macro, or the natbib original, can be called.

```
\newcommand*\nmv@citex{%
  \ifnmv@cite
    \expandafter\nmv@citex@moving
```

```
  \else
    \expandafter\nmv@citex@nat
  \fi
}
```

`\nmv@after` Later, the argument for `\cite` will need to be saved.

```
\newcommand*\nmv@after{}
```

`\nmv@citex@moving` The new version of `\@citex` is needed that looks ahead of the citation using `\futurelet`. There are three arguments to `\@citex` when using natbib. Other than that, the trick used here is similar to that in cite.

```
\newcommand*\nmv@citex@moving{}
\def\nmv@citex@moving[#1][#2]#3{%
  \leavevmode
  \skip@\lastskip\relax
  \unskip
  \begingroup
    \def\nmv@after{\nmv@citex@nat[#1][#2]{#3}}%
    \global\nmv@citefalse
    \nmv@citex@get@next\relax
}
```

`\nmv@citex@end` To get things right at the end.

```
\newcommand*\nmv@citex@end{%
    \nmv@after
  \endgroup
}
```

`\nmv@citex@get@next` `\nmv@citex@next` The next token on the input stack is saved into `\nmv@citex@next`, after gobbling up one token.

```
\newcommand*\nmv@citex@get@next[1]{%
  \futurelet\nmv@citex@next\nmv@citex@punct
}
```

`\nmv@citex@punct` `\nmv@citex@punct@undouble` `\nmv@citex@loop` The working macro for moving the punctuation. This is very much like `\@citey` in the cite package. The initial assumption is that the loop will terminate, and so the recursion call will simply do the finalisation.

```
\newcommand*\nmv@citex@punct{%
  \let\nmv@citex@loop\nmv@citex@end
  \ifx\nmv@citex@next.\relax
    \ifnum\spacefactor<\nmv@citex@sfac\else
      \expandafter\expandafter\expandafter\nmv@citex@punct@undouble
    \fi
  \fi
  \expandafter\nmv@citex@punct@aux\natmovechars\@nil
  \nmv@citex@loop
}
\newcommand*\nmv@citex@punct@undouble{%
  \let\nmv@citex@next\relax
  \let\nmv@citex@loop\nmv@citex@get@next
}
\newcommand*\nmv@citex@loop{}
```

`\nmv@citex@punct@aux` The final part of the punctuation moving system.

```
\newcommand*\nmv@citex@punct@aux[1]{%
  \ifx\nmv@citex@next#1\@empty
    #1%
    \let\nmv@citex@loop\nmv@citex@get@next
  \fi
  \ifx#1\@nil\else
    \expandafter\nmv@citex@punct@aux
  \fi
}
```

`\nmv@citex@sfac` The value of the spacing factor after a full stop is used to signal doubled punctuation. For French spacing, a bit of patching is needed.

```
\mathchardef\nmv@citex@sfac3000\relax
\expandafter\def\expandafter\frenchspacing\expandafter{%
  \frenchspacing
  \mathchardef\nmv@citex@sfac1001\relax
  \sfcode`\.\nmv@citex@sfac
  \sfcode`\?\nmv@citex@sfac
  \sfcode`\!\nmv@citex@sfac
}
\ifnum\sfcode`\.=\@m
  \frenchspacing
\fi
```

`\nmv@citex@nat` `\nmv@activate` `\cite` The swap has to be done at the beginning of the document. The internal flag from natbib is used, but under the circumstances we should be safe. `\cite` is also patched to make the system active.

```
\newcommand*\nmv@citex@nat{}
\newcommand*\nmv@activate{%
  \let\nmv@citex@nat\@citex
  \let\@citex\nmv@citex
  \let\nmv@cite\cite
  \renewcommand*{\cite}[2][]{%
    \nmv@ifmtarg{##1}{%
      \nmv@citetrue
      \nmv@cite{##2}%
    }{%
      \nmv@citefalse
      \nmv@cite[##1]{##2}}%
  }%
}
```

`\nmv@natbib@detect` So that natbib options can be set without worrying about load order, natmove doesn't require natbib. So a test is needed to see if it is actually loaded. This is done as a macro so that the effect can be changed by achemso.

```
\newcommand*\nmv@natbib@detect{%
  \@ifpackageloaded{natbib}{%
    \ifNAT@super
      \expandafter\nmv@activate
    \fi
  }{%
    \PackageInfo{natmove}{%
```

```
      The natbib package is not loaded.\MessageBreak
      Loading natmove will do nothing
    }%
  }%
}
\AtBeginDocument{\nmv@natbib@detect}
```

`\natmovechars` A user macro is needed for moving characters.

```
\newcommand*\natmovechars{.,;:}
```

⟨/natmove⟩

1.8 The configuration files

The configuration files for different journals are not very complex. Keeping everything separate simply helps with maintenance.

```
⟨*abmcb8⟩
\ProvidesFile{achemso-abmcb8.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Bio. Med. Chem. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/abmcb8⟩
⟨*aeacb3⟩
\ProvidesFile{achemso-aeacb3.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Eng. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aeacb3⟩
⟨*aeacc4⟩
\ProvidesFile{achemso-aeacc4.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Env. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aeacc4⟩
⟨*amacgu⟩
\ProvidesFile{achemso-amacgu.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Mater. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/amacgu⟩
⟨*amachv⟩
\ProvidesFile{achemso-amachv.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Meas. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/amachv⟩
⟨*anaccx⟩
\ProvidesFile{achemso-anaccx.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Nanosci. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/anaccx⟩
⟨*abmcb8⟩
\ProvidesFile{achemso-abmcb8.cfg}
```

```
  [2025-09-22 v3.14 achemso configuration: ACS Bio. Med. Chem. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/abmcb8⟩
⟨*aoiab5⟩
\ProvidesFile{achemso-aoiab5.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Org. Inorg. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aoiab5⟩
⟨*apcach⟩
\ProvidesFile{achemso-apcach.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Phys. Bio. Med. Chem. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/apcach⟩
⟨*appccd⟩
\ProvidesFile{achemso-appccd.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Polym. Au]
\def\acs@type@list{article,review,letter,perspective,suppinfo}
\setkeys{acs}{keywords = true}
⟨/appccd⟩
⟨*achre4⟩
\ProvidesFile{achemso-achre4.cfg}
  [2025-09-22 v3.14 achemso configuration: Acc. Chem. Res.]
\setkeys{acs}{biblabel = plain}
\def\acs@type@list{article,suppinfo}
\def\abstractname{Conspectus}
⟨/achre4⟩
⟨*aaembp⟩
\ProvidesFile{achemso-aaembp.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Appl. Electron. Mater.]
\def\acs@type@list{article,letter,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aaembp⟩
⟨*aaemcq⟩
\ProvidesFile{achemso-aaemcq.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Appl. Energy Mater.]
\def\acs@type@list{article,letter,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aaemcq⟩
⟨*aamick⟩
\ProvidesFile{achemso-aamick.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Appl. Mater. Interfaces]
\def\acs@type@list{article,letter,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aamick⟩
⟨*aanmf6⟩
\ProvidesFile{achemso-aanmf6.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Appl. Nano Mater.]
\def\acs@type@list{article,letter,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aanmf6⟩
⟨*aapmcd⟩
```

```
\ProvidesFile{achemso-aapmcd.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Appl. Polym. Mater.]
\def\acs@type@list{article,letter,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aapmcd⟩
⟨*aastgj⟩
\ProvidesFile{achemso-aastgj.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Agri. Sci. Tech.]
\def\acs@type@list{account,article,letter,retraction,review,viewpoint,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aastgj⟩
⟨*abseba⟩
\ProvidesFile{achemso-abseba.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Biomater. Sci. Eng.]
\setkeys{acs}{keywords = true}
\def\acs@type@list{article,review,suppinfo}
⟨/abseba⟩
⟨*accacs⟩
\ProvidesFile{achemso-accacs.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Catal.]
\setkeys{acs}{keywords = true}
\def\acs@type@list{article,letter,perspective,review,viewpoints,suppinfo}
\SectionNumbersOff
⟨/accacs⟩
⟨*acscii⟩
\ProvidesFile{achemso-acscii.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Central Sci.]
\def\acs@type@list{article,review,suppinfo}
\setkeys{acs}{doi = true}
\SectionNumbersOff
⟨/acscii⟩
⟨*acbcct⟩
\ProvidesFile{achemso-acbcct.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Chem. Biol.]
\setkeys{acs}{
  biblabel = fullstop,
  biochem  = true,
  super    = false
}
\def\acs@type@list{article,letter,review,suppinfo}
\SectionNumbersOff
⟨/acbcct⟩
⟨*acncdm⟩
\ProvidesFile{achemso-acncdm.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Chem. Neurosci.]
\def\acs@type@list{article,review,letter,suppinfo,viewpoint}
\setkeys{acs}{
  biblabel = fullstop,
  biochem  = true,
  keywords = true,
  super    = false
}
⟨/acncdm⟩
⟨*acsccc⟩
```

```
\ProvidesFile{achemso-acsccc.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Combinatorial Sci.]
\def\acs@type@list{article,letter,review,perspective,account,note,suppinfo}
\setkeys{acs}{keywords = true}
\SectionNumbersOff
⟨/acsccc⟩
⟨*aesccq⟩
\ProvidesFile{achemso-aesccq.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Earth Space Chem.]
\def\acs@type@list{article,suppinfo}
\setkeys{acs}{keywords = true}
⟨/aesccq⟩
⟨*aelccp⟩
\ProvidesFile{achemso-aelccp.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Energy Lett.]
\def\acs@type@list{letter,perspective,review,viewpoint,focus}
\SectionsOff
⟨/aelccp⟩
⟨*aeecco⟩
\ProvidesFile{achemso-aeecco.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS ES&T Eng.]
\def\acs@type@list{article,feature,perspective,review,viewpoint}
\setkeys{acs}{keywords = true}
⟨/aeecco⟩
⟨*aewcaa⟩
\ProvidesFile{achemso-aewcaa.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS ES&T Water]
\def\acs@type@list{article,feature,perspective,review,viewpoint}
\setkeys{acs}{keywords = true}
⟨/aewcaa⟩
⟨*afsthl⟩
\ProvidesFile{achemso-afsthl.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Food Sci. Tech.]
\def\acs@type@list{account,article,perspective,retraction,review,viewpoint}
\setkeys{acs}{keywords = true}
⟨/afsthl⟩
⟨*ascefj⟩
\ProvidesFile{achemso-ascefj.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Infect. Dis.]
\def\acs@type@list{article,letter,perspective,review,viewpoint,suppinfo}
\setkeys{acs}{keywords = true}
\SectionsOff
⟨/ascefj⟩
⟨*amlccd⟩
\ProvidesFile{achemso-amlccd.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Macro Lett.]
\def\acs@type@list{letter,suppinfo}
\SectionsOff
\setlength{\acs@tocentry@height}{4cm}
\setlength{\acs@tocentry@width}{8cm}
⟨/amlccd⟩
⟨*amlcef⟩
\ProvidesFile{achemso-amlcef.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Mater. Lett.]
```

```
\def\acs@type@list{letter,perspective,review,viewpoint,focus}
\SectionsOff
⟨/amlcef⟩
⟨*amclct⟩
\ProvidesFile{achemso-amclct.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Med. Chem. Lett.]
\def\acs@type@list{article,letter,perspective,suppinfo}
\SectionNumbersOff
⟨/amclct⟩
⟨*amrcda⟩
\ProvidesFile{achemso-amrcda.cfg}
  [2025-09-22 v3.14 achemso configuration: Acc. Mater. Res.]
\def\acs@type@list{account,article,editorial,retraction,suppinfo}
⟨/amrcda⟩
⟨*ancac3⟩
\ProvidesFile{achemso-ancac3.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Nano]
\setkeys{acs}{
  abbreviations = true,
  biblabel      = fullstop,
  etalmode      = truncate,
  maxauthors    = 20,
  keywords      = true
}
\def\acs@type@list{article,perspective,suppinfo}
\newcommand*{\latin}[1]{\emph{#1}}
\SectionNumbersOff
⟨/ancac3⟩
⟨*anmafm⟩
\ProvidesFile{achemso-anmafm.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Nano Med.]
\setkeys{acs}{
  abbreviations = true,
  articletitle  = true,
  biblabel      = fullstop,
  etalmode      = truncate,
  maxauthors    = 20,
  keywords      = true
}
\def\acs@type@list{editorial,viewpoint,perspective,review,article,suppinfo}
⟨/anmafm⟩
⟨*acsodf⟩
\ProvidesFile{achemso-acsodf.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Omega.]
\def\acs@type@list{article}
⟨/acsodf⟩
⟨*apchd5⟩
\ProvidesFile{achemso-apchd5.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Photon.]
\def\acs@type@list{article,letter,perspective,review,suppinfo}
\setkeys{acs}{keywords = true}
\ifx\acs@manuscript\acs@manuscript@letter
  \SectionNumbersOff
\fi
```

```
⟨/apchd5⟩
⟨*aidcbc⟩
\ProvidesFile{achemso-aidcbc.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Sensors]
\def\acs@type@list{article,letter,perspective,review,suppinfo}
\setkeys{acs}{keywords = true}
\SectionNumbersOff
⟨/aidcbc⟩
⟨*ascecg⟩
\ProvidesFile{achemso-ascecg.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Sustainable Chem Eng.]
\setkeys{acs}{
  biblabel = fullstop,
  keywords = true
}
\SectionNumbersOff
\def\acs@type@list{article,feature,letter,perspective,review,suppinfo}
⟨/ascecg⟩
⟨*asbcd6⟩
\ProvidesFile{achemso-asbcd6.cfg}
  [2025-09-22 v3.14 achemso configuration: ACS Synth. Biol.]
\setkeys{acs}{
  abbreviations = true,
  biblabel      = fullstop,
  biochem       = true,
  keywords      = true,
  super         = false
}
\def\acs@type@list{article,letter,note,tutorial,review,suppinfo}
⟨/asbcd6⟩
⟨*ancham⟩
\ProvidesFile{achemso-ancham.cfg}
  [2025-09-22 v3.14 achemso configuration: Anal. Chem.]
\def\acs@type@list{article,note,suppinfo}
\SectionNumbersOff
⟨/ancham⟩
⟨*bichaw⟩
\ProvidesFile{achemso-bichaw.cfg}
  [2025-09-22 v3.14 achemso configuration: Biochemistry]
\setkeys{acs}{
  abbreviations = true,
  biblabel      = brackets,
  biochem       = true,
}
\SectionNumbersOff
\def\acs@maketitle@extras@hook{%
  \par
  \acs@title@short@print
}
\g@addto@macro{\maketitle}{\newpage}
```

`\acs@author@fnsymbol` Some changes to do with footnotes: symbols are different and symbol number one can only be used for the title.

```
\def\acs@author@fnsymbol#1{%
```

```
  \ensuremath{%
    \ifcase #1 *\or
      \dagger\or
        \ddagger\or
          \S\or
            \parallel\or
              \perp\or
                \P\or
                  \|\or
                    \bot\or
                      \#\or
                        @\or
                          \triangle\or
                            \nabla\else
                              #1%
    \fi
  }%
}
\def\@maketitle@title@hook{%
  \ifnum\acs@footnote@cnt>\@ne
  \else
    \global\acs@footnote@cnt\@ne
  \fi
}

⟨/bichaw⟩
⟨*bcches⟩
\ProvidesFile{achemso-bcches.cfg}
  [2025-09-22 v3.14 achemso configuration: Bioconjugate Chem.]
\setkeys{acs}{
  biochem = true,
  super   = false
}
\SectionNumbersOff
⟨/bcches⟩
⟨*bomaf6⟩
\ProvidesFile{achemso-bomaf6.cfg}
  [2025-09-22 v3.14 achemso configuration: Biomacromolecules]
\def\acs@type@list{article,comment,communication,note,review,suppinfo}
\SectionNumbersOff
\AtEndOfClass{\SectionsOn}
⟨/bomaf6⟩
⟨*crtoec⟩
\ProvidesFile{achemso-crtoec.cfg}
  [2025-09-22 v3.14 achemso configuration: Chem. Res. Toxicol.]
\setkeys{acs}{
  abbreviations = true,
  biochem       = true,
  keywords      = true
}
\def\acs@maketitle@extras@hook{%
  \par
  \acs@title@short@print
}
```

```
\def\acs@type@list{%
  article,perspective,profile,review,suppinfo%
}
\SectionNumbersOff
⟨/crtoec⟩
⟨*chreay⟩
\ProvidesFile{achemso-chreay.cfg}
  [2025-09-22 v3.14 achemso configuration: Chem. Rev.]
  \setkeys{acs}{
    etalmode      = truncate,
    maxauthors    = 10
  }
\def\acs@type@default{review}
\def\acs@type@list{review}
```

The references section is numbered in *Chem. Rev.*

```
\floatstyle{plaintop}
\restylefloat{scheme}
\floatstyle{plain}
\def\bibsection{\acs@section{\refname}}
⟨/chreay⟩
⟨*cmatex⟩
%    \begin{macrocode}
\ProvidesFile{achemso-cmatex.cfg}
  [2025-09-22 v3.14 achemso configuration: Chem. Mater.]
\setkeys{acs}{keywords = true}
\SectionNumbersOff
\ifx\acs@manuscript\acs@manuscript@communication
  \AbstractOff
  \SectionsOff
\fi
⟨/cmatex⟩
⟨*cgdefu⟩
\ProvidesFile{achemso-cgdefu.cfg}
  [2025-09-22 v3.14 achemso configuration: Cryst. Growth Des.]
\def\acs@type@list{%
  article,communication,perspective,suppinfo%
}
\SectionNumbersOff
\ifx\acs@manuscript\acs@manuscript@communication
  \SectionsOff
\fi
\setlength{\acs@tocentry@height}{8.9 cm}
\setlength{\acs@tocentry@width}{4.6 cm}
⟨/cgdefu⟩
⟨*enfuem⟩
\ProvidesFile{achemso-enfuem.cfg}
  [2025-09-22 v3.14 achemso configuration: Energy Fuels]
\def\acs@type@list{article,review,suppinfo}
\SectionNumbersOff
⟨/enfuem⟩
⟨*esthag⟩
\ProvidesFile{achemso-esthag.cfg}
  [2025-09-22 v3.14 achemso configuration: Environ. Sci. Technol.]
```

```
\def\acs@type@list{article,feature,perspective,review,suppinfo}
\SectionNumbersOff
\setkeys{acs}{maxauthors = 0, keywords = true}
⟨/esthag⟩
⟨*estlcu⟩
\ProvidesFile{achemso-estlcu.cfg}
  [2025-09-22 v3.14 achemso configuration: Environ. Sci. Technol. Lett.]
\def\acs@type@list{letter,review,suppinfo}
\SectionNumbersOff
⟨/estlcu⟩
⟨*iecred⟩
\ProvidesFile{achemso-iecred.cfg}
  [2025-09-22 v3.14 achemso configuration: Ind. Eng. Chem. Res.]
\setkeys{acs}{biblabel = brackets}
\SectionNumbersOff
⟨/iecred⟩
⟨*inoraj⟩
\ProvidesFile{achemso-inoraj.cfg}
  [2025-09-22 v3.14 achemso configuration: Inorg. Chem.]
\SectionNumbersOff
\ifx\acs@manuscript\acs@manuscript@communication
  \AbstractOff
  \SectionsOff
\fi
\setkeys{acs}{doi = true}
⟨/inoraj⟩
⟨*jaaucr⟩
\ProvidesFile{achemso-jaaucr.cfg}
  [2025-09-22 v3.14 achemso configuration: JACS Au]
\def\acs@type@list{spotlight,account,article,communication,letter,perspective,suppinfo}
⟨/jaaucr⟩
⟨*jafcau⟩
\ProvidesFile{achemso-jafcau.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Agric. Food Chem.]
\setkeys{acs}{keywords = true}
\def\acs@type@list{article,suppinfo}
\SectionNumbersOff
⟨/jafcau⟩
⟨*jceda8⟩
\ProvidesFile{achemso-jceda8.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Chem. Ed.]
\setkeys{acs}{keywords = true}
\SectionNumbersOff
\def\acs@type@list{article,suppinfo}
\SectionNumbersOff
⟨/jceda8⟩
⟨*jceaax⟩
\ProvidesFile{achemso-jceaax.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Chem. Eng. Data]
\def\acs@type@list{article,suppinfo}
\def\refname{Literature Cited}
\SectionNumbersOff
⟨/jceaax⟩
⟨*jcisd8⟩
```

```
\ProvidesFile{achemso-jcisd8.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Chem. Inf. Model.]
\def\acs@type@list{article,suppinfo}
\SectionNumbersOff
⟨/jcisd8⟩
⟨*jctcce⟩
\ProvidesFile{achemso-jctcce.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Chem. Theory Comput.]
\def\acs@type@list{article,suppinfo}
\setkeys{acs}{maxauthors = 0}
⟨/jctcce⟩
⟨*jmcmar⟩
\ProvidesFile{achemso-jmcmar.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Med. Chem.]
\def\acs@type@list{article,letter,perspective,suppinfo}
\SectionNumbersOff
\setlength{\acs@tocentry@height}{4.45cm}
\setlength{\acs@tocentry@width}{8.25cm}
⟨/jmcmar⟩
⟨*jnprdf⟩
\ProvidesFile{achemso-jnprdf.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Nat. Prod.]
\renewcommand*{\abstractname}{ABSTRACT}
\renewcommand*{\acknowledgementname}{ACKNOWLEDGEMENT}
\renewcommand*{\suppinfoname}{ASSOCIATED CONTENT}
\SectionNumbersOff
\renewcommand*{\acs@abstract}{%
  \quotation
  \textbf{\abstractname :}%
}
\AbstractOn
\ifx\acs@manuscript\acs@manuscript@communication
  \AbstractOff
  \SectionsOff
\fi
\def\refname{REFERENCES}
\captionsetup{
  labelfont = bf,
  labelsep  = period
}
⟨/jnprdf⟩
⟨*joceah⟩
\ProvidesFile{achemso-joceah.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Org. Chem.]
\ifx\acs@manuscript\acs@manuscript@communication
  \AbstractOff
  \SectionsOff
\fi
\floatstyle{plaintop}
\restylefloat{scheme}
\floatstyle{plain}
\renewcommand*\acs@type@list{article,communication,note,perspective,review,suppinfo}
⟨/joceah⟩
⟨*jpcafh⟩
```

```
\ProvidesFile{achemso-jpcafh.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Phys. Chem. A]
\def\acs@type@list{article,suppinfo}
\setkeys{acs}{
  etalmode     = truncate,
  maxauthors   = 10
}
\SectionNumbersOff
\captionsetup[table]{labelfont=bf,textfont=bf}
```

Title

```
\g@addto@macro{\maketitle}{\newpage}
⟨/jpcafh⟩
⟨*jpcbfk⟩
\ProvidesFile{achemso-jpcbfk.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Phys. Chem. B]
\def\acs@type@list{article,suppinfo}
\setkeys{acs}{
  etalmode     = truncate,
  maxauthors   = 10
}
\SectionNumbersOff
\captionsetup[table]{labelfont=bf,textfont=bf}
\g@addto@macro{\maketitle}{\newpage}
⟨/jpcbfk⟩
⟨*jpccck⟩
\ProvidesFile{achemso-jpccck.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Phys. Chem. C]
\def\acs@type@list{article,suppinfo}
\setkeys{acs}{
  etalmode     = truncate,
  maxauthors   = 10
}
\SectionNumbersOff
\captionsetup[table]{labelfont=bf,textfont=bf}
\g@addto@macro{\maketitle}{\newpage}
⟨/jpccck⟩
⟨*jpclcd⟩
\ProvidesFile{achemso-jpclcd.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Phys. Chem. Lett.]
\setkeys{acs}{
  etalmode   = truncate,
  maxauthors = 10
}
\def\acs@type@default{letter}
\def\acs@type@list{letter}
\SectionNumbersOff
\captionsetup[table]{labelfont=bf,textfont=bf}
\g@addto@macro{\maketitle}{\newpage}
\renewcommand{\acs@tocentry@print}[1]{%
  \gdef\acs@tocentry@text{#1}%
}
\renewcommand*{\acs@abstract@extras}{%
  \begingroup
```

```
    \acs@tocentry@print@aux
  \endgroup
  \acs@keywords@print
  \newpage
}
\setlength\acs@tocentry@height{2in}
\setlength\acs@tocentry@width{2in}
⟨/jpclcd⟩
⟨*jprobs⟩
\ProvidesFile{achemso-jprobs.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Proteome Res.]
\setkeys{acs}{keywords = true}
\def\acs@type@list{article,review,suppinfo}
\SectionNumbersOff
⟨/jprobs⟩
```

The *J. Am. Chem. Soc.* configuration is rather more complicated as there is the need to construct a "galley-like" layout for communications.

```
⟨*jacsat⟩
\ProvidesFile{achemso-jacsat.cfg}
  [2025-09-22 v3.14 achemso configuration: J. Am. Chem. Soc.]
\SectionNumbersOff
\ifx\acs@manuscript\acs@manuscript@communication\else
  \expandafter\endinput
\fi
```

Everything from here onward applies only to communications. Some adjustments are now made using the existing tools.

```
\setkeys{acs}{
  email  = true,
  layout = twocolumn
}
\SectionsOff
\acs@layout@nine
```

`abstract` (*env.*) The abstract appears at the start of the document, with lines around it.s

```
\renewenvironment{abstract}{%
  \hrule
  \vspace{2 mm}%
  \sffamily
  \noindent
  \emph{\textbf{Abstract:}}%
}{%
  \vspace{2 mm}%
  \hrule
  \vspace{6 mm}%
}
```

`\acksize` `\affilsize` `\authorsize` `\emailsize` `\capsize` `\refsize` `\suppsize` `\titlesize` To keep things logical, the size macros are given names related to their function. Some of these are new, some are defined in the class.

```
\def\affilsize{%
  \@setfontsize\affilsize\@ixpt\@xpt
}
\def\acksize{%
```

```
  \@setfontsize\acksize\@ixpt\@xipt
}
\def\authorsize{%
  \@setfontsize\authorsize{10.5}{12.5}%
}
\newcommand*\capsize{%
  \@setfontsize\capsize\@viiipt\@ixpt
}
\def\emailsize{%
  \@setfontsize\emailsize\@viiipt{15}%
}
\newcommand*\refsize{%
  \@setfontsize\refsize{7.5}{7.5}%
}
\def\suppsize{%
  \@setfontsize\suppsize{8.5}{10.5}%
}
\def\titlesize{%
  \@setfontsize\titlesize\@xiipt{13}%
}
\let\footnotesize\refsize
\let\captionfont\capsize
```

`\emailfont` A slight font change.

```
\def\emailfont{\sffamily}
```

`\ps@plain` `\ps@jacs` The header styles are done the hard way, to keep down the number of packages loaded.

```
\def\ps@plain{%
  \let\@mkboth\@gobbletwo
  \let\@oddhead\@empty
  \def\@oddfoot{%
    \reset@font
    \sffamily
    \textbf{\thepage}%
    \hfil
  }%
  \let\@evenhead\@empty
  \let\@evenfoot\@oddfoot
}
\def\ps@acs{%
  \def\@oddfoot{%
    \reset@font
    \sffamily
    \textbf{\thepage}%
    \hfil
  }%
  \def\@evenfoot{%
    \reset@font
    \hfil
    \sffamily
    \textbf{\thepage}%
  }%
  \def\@oddhead{}%
```

```
  \let\@evenhead\@oddhead
}
\pagestyle{acs}
```

\acs@space@pre@title
\acs@space@post@title
\acs@space@post@author
\acs@space@post@address
\acs@space@post@email

Length adjustments for the title.

```
\setlength\acs@space@pre@title{16mm}
\setlength\acs@space@post@title{0mm}
\setlength\acs@space@post@author{0mm}
\setlength\acs@space@post@address{0mm}
\setlength\acs@space@post@email{-1mm}
\setlength\acs@maketitle@width{152.4mm}
```

\acs@contact@details

Contact details are different here.

```
\def\acs@contact@details{%
  Received \today; E-mail: \acs@email@list
}
```

\acs@maketitle@extras

No keywords or abbreviations for *J. Am. Chem. Soc.*.

```
\let\acs@maketitle@extras\relax
```

Getting the floats correct is a difficult task "by hand"; using the caption package makes this a lot easier.

```
\floatstyle{plaintop}
\restylefloat{scheme}
\floatstyle{plain}
\DeclareCaptionLabelSeparator{perquad}{.\quad}
\captionsetup{
  singlelinecheck = off,
  labelfont       = {bf,it,sf},
  textfont        = sf,
  labelsep        = perquad
}
\captionsetup[figure]{textfont=rm}
```

\acs@table
\table

A patch or \table.

```
\newcommand*\acs@table{}
\let\acs@table\table
\def\table{%
  \capsize
  \acs@table
}
```

The bibliography has to be adjusted.

```
\AtBeginDocument{%
  \def\bibsection{%
    \@startsection
      {section}
      {1}
      {\z@}{\z@}{2.5mm}%
      {\normalfont\acksize\bfseries}
      {\hrule\nobreak\vspace{1.2mm}\noindent\refname}%
  }%
  \let\bibfont\refsize
```

```
  \setlength{\bibhang}{0.61cm}%
  \setlength{\bibsep}{0mm}%
}
⟨/jacsat⟩
⟨*langd5⟩
\ProvidesFile{achemso-langd5.cfg}
  [2025-09-22 v3.14 achemso configuration: Langmuir]
\def\acs@type@list{article,letter,suppinfo}
\SectionNumbersOff
⟨/langd5⟩
⟨*mamobx⟩
\ProvidesFile{achemso-mamobx.cfg}
  [2025-09-22 v3.14 achemso configuration: Macromolecules]
\SectionNumbersOff
\setkeys{acs}{doi = true}
⟨/mamobx⟩
⟨*mpohbp⟩
\ProvidesFile{achemso-mpohbp.cfg}
  [2025-09-22 v3.14 achemso configuration: Mol. Pharm.]
\setkeys{acs}{keywords = true}
\def\acs@type@list{article,suppinfo}
\SectionNumbersOff
⟨/mpohbp⟩
⟨*nalefd⟩
\ProvidesFile{achemso-nalefd.cfg}
  [2025-09-22 v3.14 achemso configuration: Nano Lett.]
\setkeys{acs}{keywords = true}
\def\acs@type@default{letter}
\def\acs@type@list{letter}
\SectionNumbersOff
⟨/nalefd⟩
⟨*orlef7⟩
\ProvidesFile{achemso-orlef7.cfg}
  [2025-09-22 v3.14 achemso configuration: Org. Lett.]
\def\acs@type@default{communication}
\def\acs@type@list{communication}
\SectionNumbersOff
\setkeys{acs}{layout = twocolumn}
\RequirePackage{xcolor}
\definecolor{orglett}{RGB}{128,0,0}
⟨/orlef7⟩
⟨*oprdfk⟩
\ProvidesFile{achemso-oprdfk.cfg}
  [2025-09-22 v3.14 achemso configuration: Org. Proc. Res. Dev.]
\def\acs@type@list{article,highlight,review,suppinfo}
\SectionNumbersOff
⟨/oprdfk⟩
⟨*orgnd7⟩
\ProvidesFile{achemso-orgnd7.cfg}
  [2025-09-22 v3.14 achemso configuration: Organometallics]
\SectionNumbersOff
⟨/orgnd7⟩
```

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