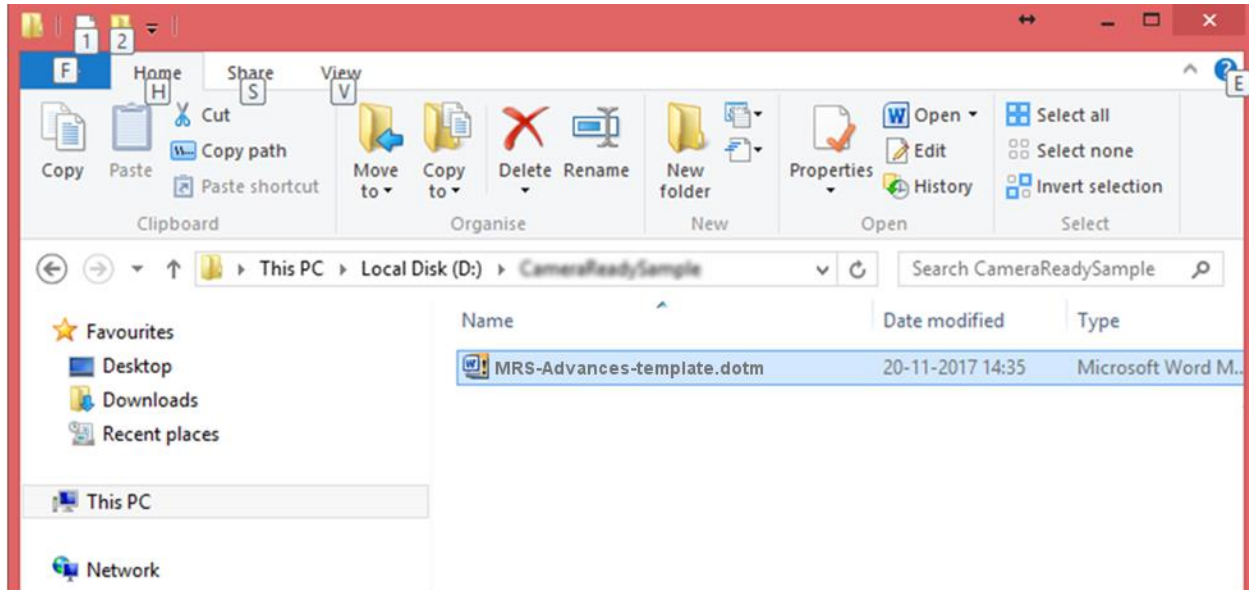
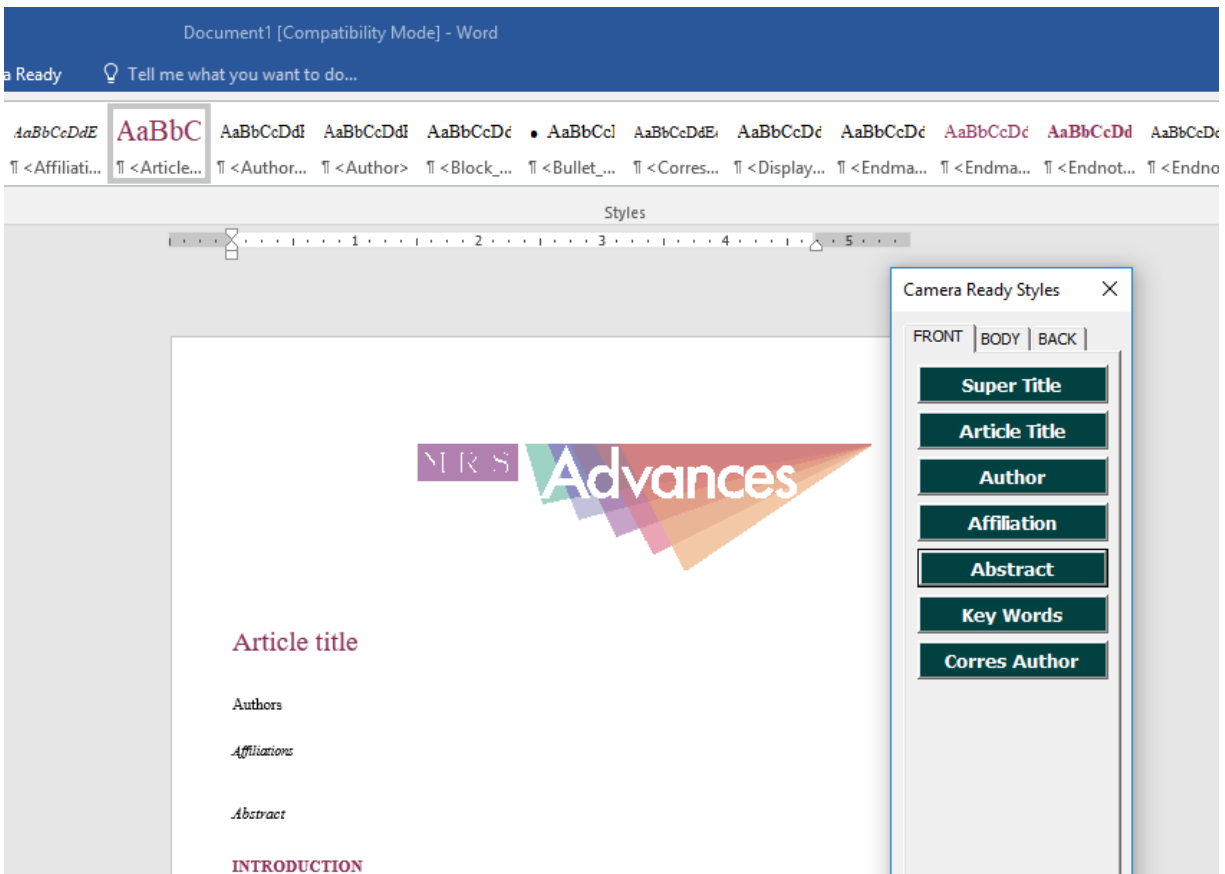


Step by Step Guide to Create a New Document Based on the MRS Advances Formatting Template

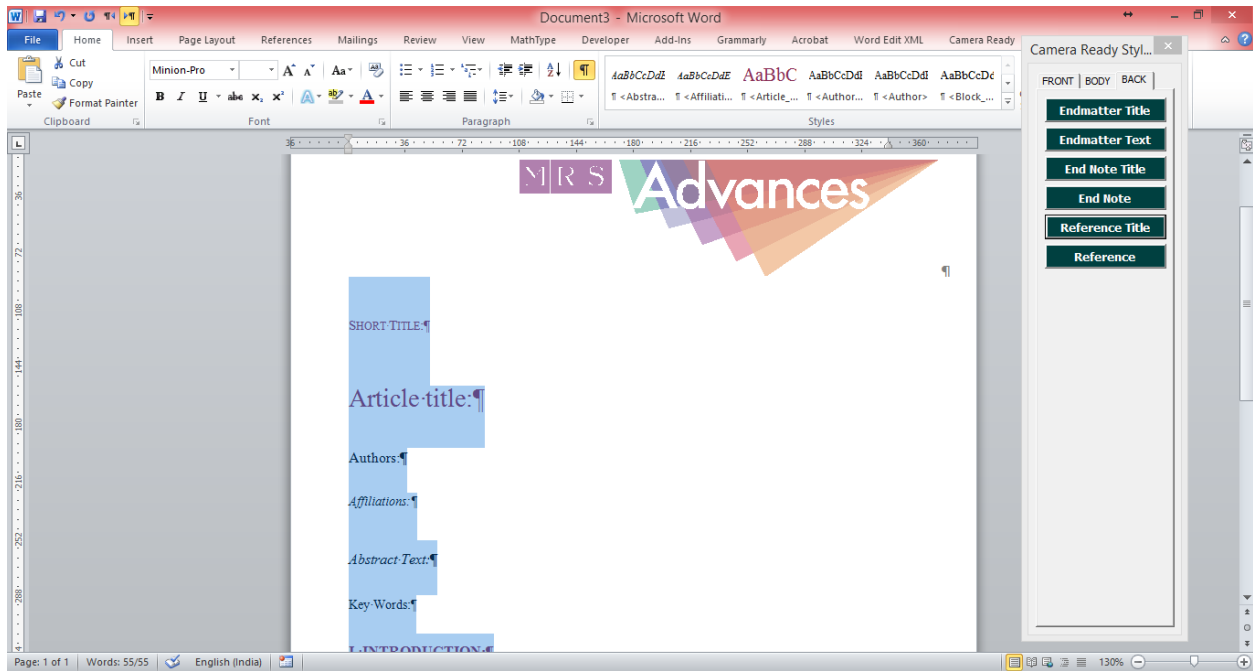
Step 1: Save the *MRS Advances* formatting template (available at <http://www.mrs.org/mrs-advances-manuscript-instructions/>) to your preferred location/drive. Locate the saved template and double click to open it.



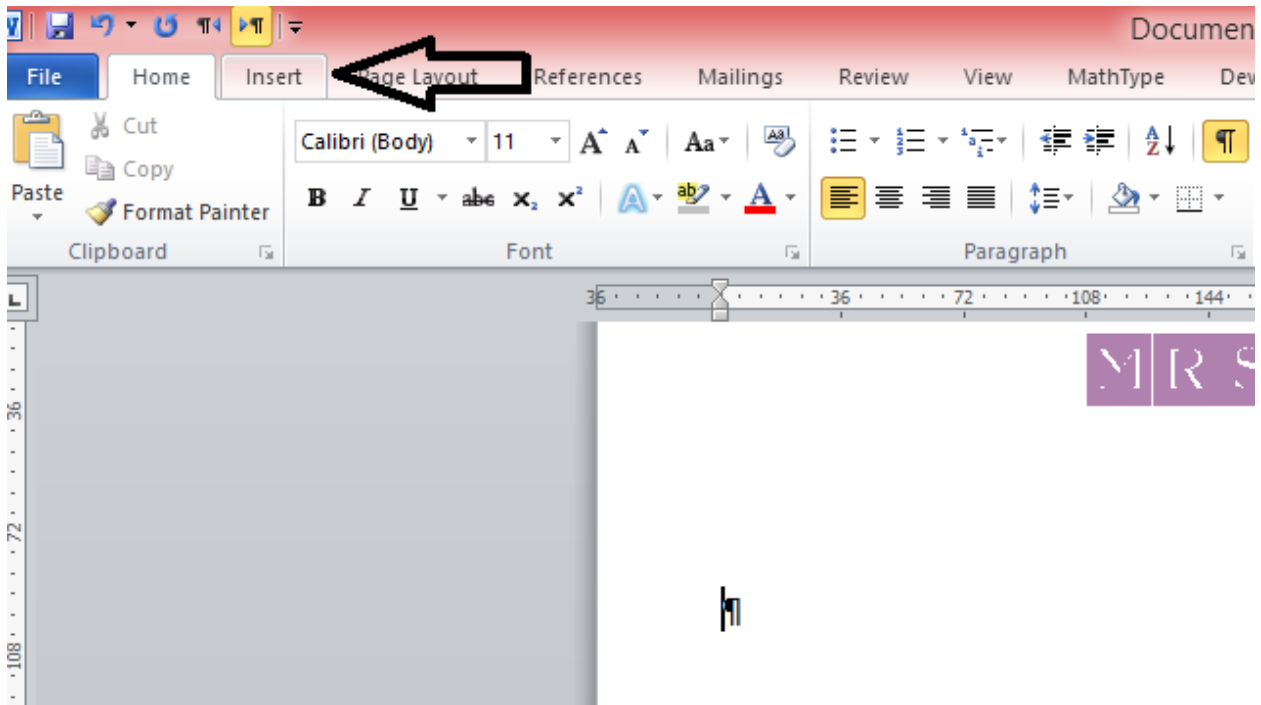
Step 2: A new document will be opened like below:



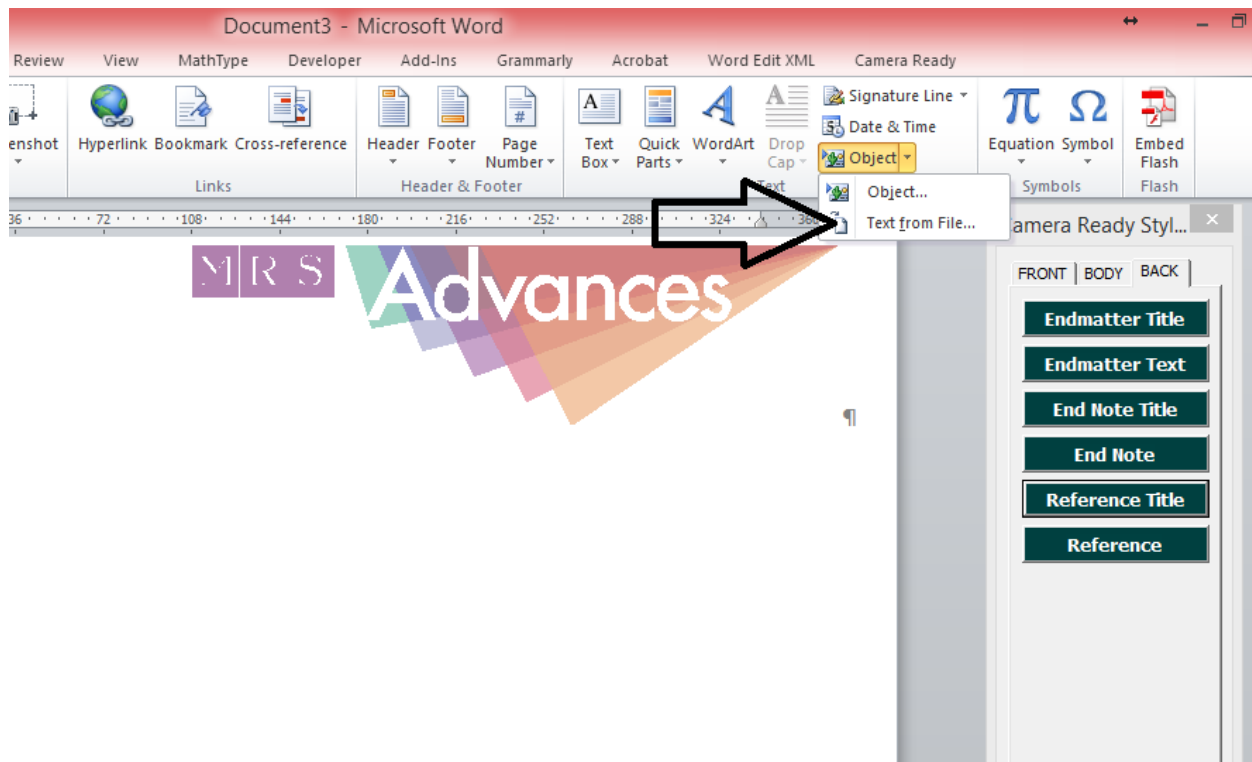
Step 3: Select all the contents by pressing “Ctrl+A” and delete all the contents.



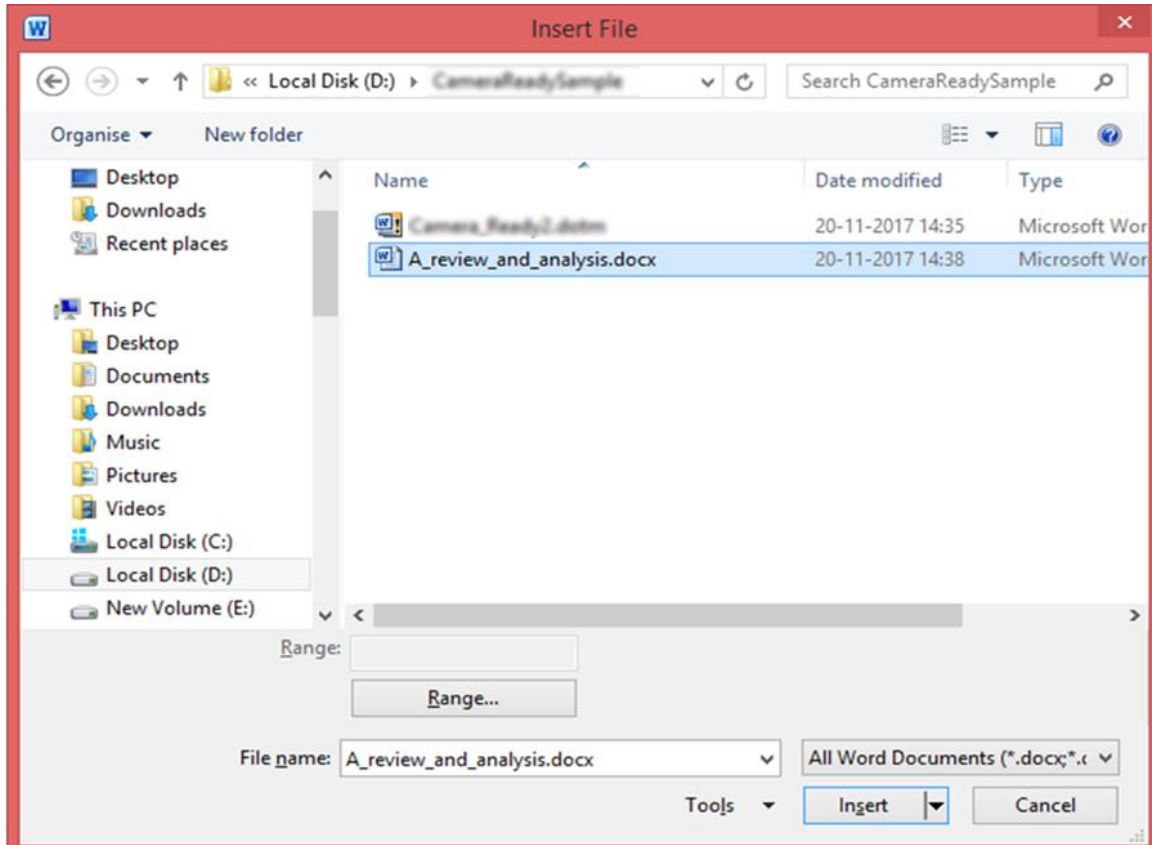
Step 4: Go to “Insert” Tab.

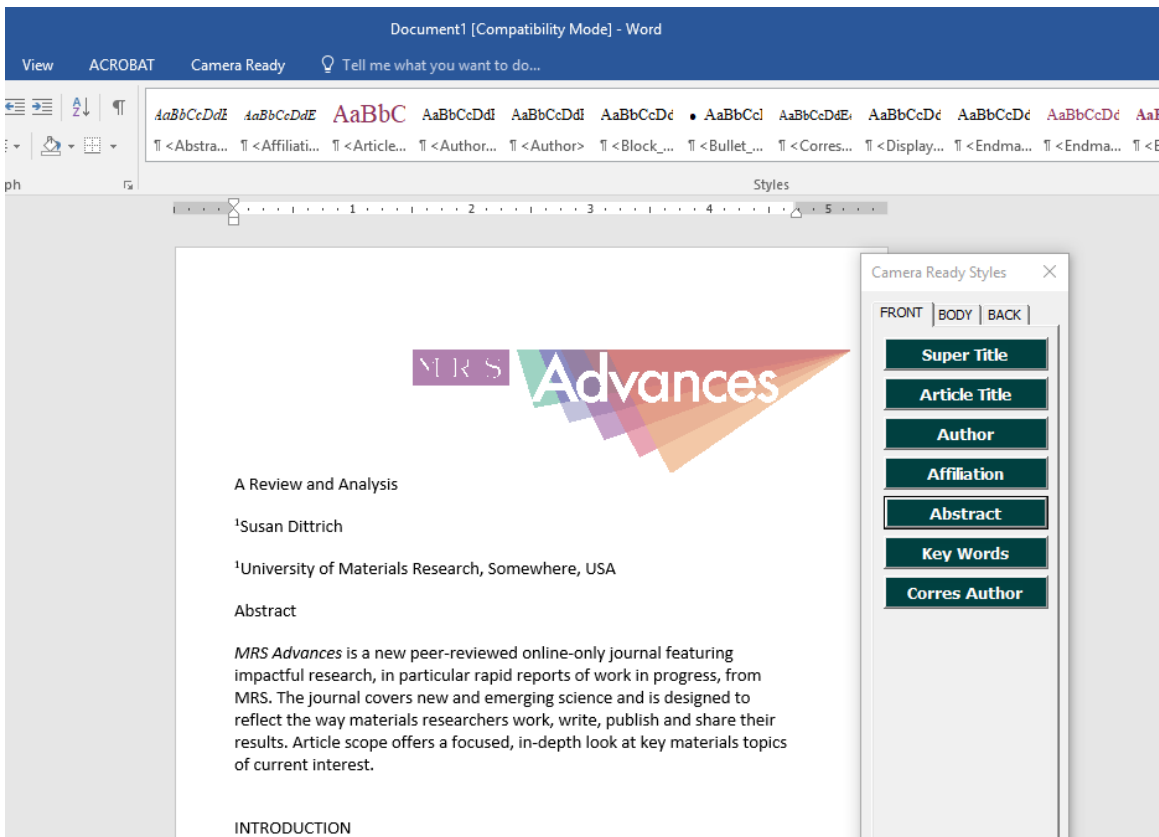


Step 5: Click “Text from File” option as shown below:

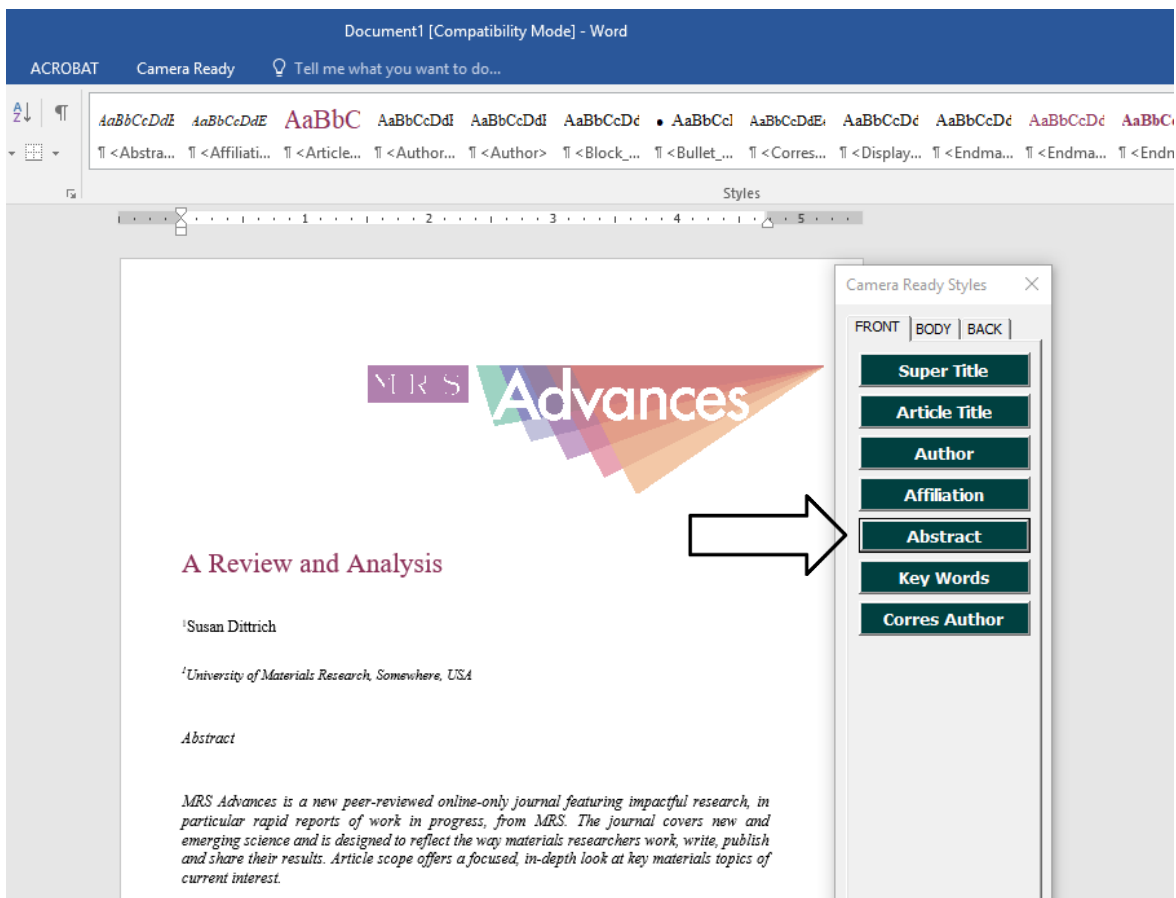


Step 6: Browse the manuscript path to find your manuscript document and select the file. Then click the “Insert” button.

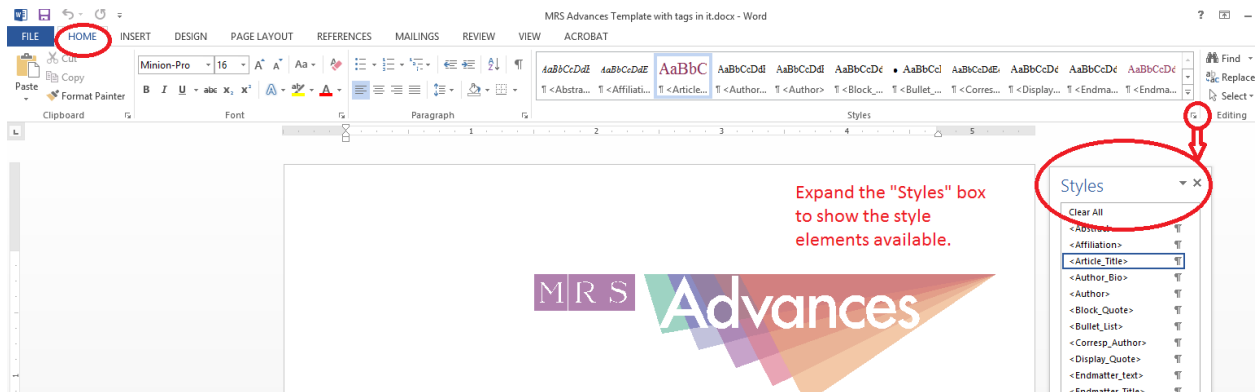




Step 7: The list of styles is located at the right side of the screen. Click the buttons to apply the appropriate style to all portions of the manuscript and save the file when finished. See the notes and Glossary of Terms that follows. Heading samples are on the last page of this document.



If the Camera Ready Styles panel does not appear, go to the Home menu in Word and expand the “Styles” box as per below. Apply the style elements to your manuscript using the “Styles” box.



Step 8: Save and submit the file as a Word document. Please check that all figures, tables, and math equations appear correctly in the file. Authors will not review final proofs.

NOTES

- The *MRS Advances* logo should appear on the FIRST page only.
- Label the abstract with an *ABSTRACT* heading.
- Use the Paragraph style for text. Paragraphs should be indented.
- References should be single spaced.
- Resize figures and tables as needed so that they do not extend into the margins.
- Apply the Math Equation style for equations embedded in a paragraph, and then the Paragraph style to the whole paragraph. Adjust the line spacing in the paragraph if needed to ensure that the equation is fully visible.
- *MRS Advances* papers do not use the following styles:
 - Super Title
 - Key Words (keywords should not be included in the manuscript)
 - Endmatter Title
 - Endmatter Text
 - End Note Title
 - End Note

GLOSSARY OF TERMS

H1= Level 1 heading (main heading)

H2= Level 2 heading (sub-heading)

H3= Level 3 heading (sub-heading)

H4= Level 4 heading (sub-heading)

H5= Level 5 heading (sub-heading)

Papers will usually not have more than two levels of headings, but the sample on the following page illustrates how multiple heading levels are used.

Example taken from . . .

Orbital-free density functional theory for materials research

William C. Witt, Beatriz G. del Rio, Johannes M. Dieterich, and Emily A. Carter

<https://doi.org/10.1557/jmr.2017.462>

THEORY AND IMPLEMENTATION (H1= LEVEL 1 HEADING)

The fundamentals of OFDFT¹⁻⁴ and DFT more generally⁵⁻⁸ are described in a great number of references. For completeness, we review the most salient points here. In principle, for a system of electrons subject to an external potential $v(\mathbf{r})$, one may find its ground-state energy by varying the electron distribution $n(\mathbf{r})$ to minimize an energy. . .

Kinetic energy density functionals (H2= Level 2 heading)

The discussion on kinetic energy density functionals (KEDFs) is divided into three parts. First, we present three relatively simple approximations . . .

Three simple approximations (H3= Level 3 heading)

Single-orbital Systems and the von Weizsäcker Functional (H4= Level 4 heading)

For a single, isolated electron in a static external potential, one can infer a ground-state wave function by computing the square root of the ground-state electron density, and thereby obtain from elementary quantum mechanics the exact $T_s[n]$ for this simple system. . . .

The Free-electron Gas and the Thomas-Fermi Functional (H4= Level 4 heading)

The free-electron gas is so-named because its members traverse freely across a perfectly flat potential landscape, encumbered only by the Pauli Exclusion Principle. . . .

Weakly Perturbed Free-electron Gas (H4= Level 4 heading)

When $n(\mathbf{r})$ deviates only modestly from uniformity—more precisely, when $n(\mathbf{r}) = n_0 + \Delta(\mathbf{r})$ with $|\Delta(\mathbf{r})| \ll n_0$ and $\int d\mathbf{r} \Delta(\mathbf{r}) = 0$ —the kinetic energy $T_s[n]$ may be obtained with high accuracy from the second-order perturbation expansion for a free-electron gas

Combining the Three Approximations (H4= Level 4 heading)

Each of these elementary approximations for $T_s[n]$ is exact in a certain limit and becomes accurate as an electron density approaches that limit. . . .

Nonlocal functionals based on the Lindhard response function (H3= Level 3 heading)

Most of the materials science studies described in this review were enabled by two classes of approximations for $T_s[n]$ that both incorporate the Lindhard response function, $\chi_0(\mathbf{k})$

The Chacón-Alvarellos-Tarazona Functional and Generalizations (H4= Level 4 heading)

The Chacón-Alvarellos-Tarazona (CAT) functional²³ was introduced in 1985, and its key ingredient has the. . .