**Manuscript Template – Louie Group**

**Contents:**

* Title Page
* Abstract
* Manuscript (Introduction, Experimental, Results and Discussion, Conclusions, Acknowledgments)
* References

\*Check the guidelines of the target journal for details on the requirements of each section.

**Note the formatting:**

Font: Times New Roman, 12 pt

Paragraph: Double-spaced, no extra space between paragraphs, indent each new paragraph

Section Headings: Bold for main headings, italics for sub-headings

Figures and Tables: See separate document for formatting guidelines

**Title of Your Manuscript**

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Submitted to *Journal Name*

**Abstract** (typically 250-300 words – check for any specific guidelines for the target journal)

Write *after* completing your manuscript. Summarize the purpose, approach, and key findings and implications of the research.

**Introduction** (Aim to stay within 2-3 pages)

Start with a brief overview of the field to which your research contributes (e.g., environmental impacts of nanomaterials) and the importance of the field (keep in mind the focus of the journal to which you’re submitting).

Narrow down to the importance of your specific topic area (e.g., effects of surface coatings on nanomaterial reactivity).

Describe the current state of knowledge (literature, preferably within last 5 years) on your specific topic, leading up to the research gap that your study will contribute to fill.

Explicitly state the objectives and approach of your research to answer the remaining research questions that you identified above.

**Experimental** or **Materials and Methods** (Check the journal guidelines for section name)

*Materials*

State the full chemical name and sources (manufacturer, purity or grade, location) of all major chemicals used. If word limits are an issue, minor chemicals may be specified in the supporting information.

*Subsection A*

 Subsection A text.

*Subsection B, etc.*

 Subsection B text.

If methods are short, use just one subsection for the experimental methods. Otherwise, split into separate subsections titled with the analytical technique or type of experiment, e.g., “*Size Exclusion Chromatography*” or “*Aggregation Experiments*.” Describe analytical methods with details on the run conditions (e.g. buffers or eluent used, flowrate if applicable, injection volumes, wavelength(s) used for spectrophotometric measurements) as well as important settings selected in the software (e.g., number of replicates averaged, what data fitting models were applied, etc.). For experiments, provide all details needed for someone else to replicate the experiment, e.g., pH and background water chemistry (salt concentrations and composition) of the samples, mixing time, what controls were run, use of sample refrigeration if applicable, what containers were used if important, etc. Generally, you can refer to the Experimental section of previously published articles using similar methods as a first indicator of what information is typical to include.

**Results and Discussion**

*Subsection A*

Subsection A text.

*Subsection B*

Subsection B text.

Divide the study into reasonable subsections to describe each set of characterization data or experiment that contributes to build up the full research study. Sections should be arranged to tell a coherent story with good flow – not necessarily in the chronological order that the experiments or measurements were performed. (You should have already written up an Outline to confirm the structure of the results and discussion with your PI, before starting to write up the whole manuscript.)

By the end of your description, the reader should feel that you satisfied the objective of your study as described in the Introduction and that all proposed hypotheses to explain your results were sufficiently supported or refuted by theory or experimental evidence.

**Conclusions** or **Implications** (Check the journal for any specific guidelines.)

 Briefly summarize the key findings of your research study, and discuss the implications in the context of your scientific field (you may look back at your Introduction). Discuss any further experiments that are needed to fully understand the problem of interest or any future research directions that are inspired by the results of your study.

**Acknowledgments**

 Acknowledge any people who assisted you are provided materials or resources. Acknowledge funding sources.

**References**

 Use EndNote or another reference management software to prepare and manage the list of references. For reference style, look up the official guidelines from the journal, and also check style used in the most recently published issue of the journal (formatted articles, not Articles ASAP).