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**Corresponding author: liujb3@ncsu.edu*

DOI:

GRAPHICAL ABSTRACT





Your optional graphical abstract can go here. A graphical abstract is a single image file that visually shows the main message of your research study. You can think of a graphical abstract as a presentation of three parts: The context of your research topic; methodology; and main conclusions. The graphic should be concise and not too cluttered with images or diagrams. Authors can submit a *single picture file* in a preferred format of JPEG, PNG, or TIFF. Please make sure the font size is large enough for viewing and the file has good resolution. Examples can be found here: [BioResources Format Instructions](#)

ORCID ID: Orcid ID numbers are optional. Authors can add their Orcid link to the icon after their name. Right click on the icon, Edit link, and paste your specific Orcid link in the box.

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30 Fourth D. F. Author ^c,

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32 Your abstract, in 10-point Arial font, indented 0.5 inches, having a
33 maximum length of 200 words (ideally 175 words), goes here. The abstract
34 briefly summarizes your main findings, using terms that are
35 understandable to a general scientific audience. Briefly summarize the
36 context and the significance of the findings, describing how your results
37 contribute to the field of science and potential or actual applications.
38 Remember that the journal's audience is multidisciplinary. Acronyms are
39 discouraged in the Abstract. Special characters are not permitted. The
40 present document has been set up to serve as a template for the format
41 of your own research article that you are submitting for publication in
42 *BioResources*. It is recommended to start with a fresh copy of this template
43 document, save a copy of a new version of it, and then replace the
44 contents with your own contents.

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53 *89453 Your Country; *Corresponding author: liujb3@ncsu.edu*

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56 **INTRODUCTION**

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58 Skip one line after each major heading (as shown here, but not after subheadings).
59 Indent all paragraphs. Your introduction should provide sufficient background in your
60 topic area so that the reader will be able to understand the context and importance of your
61 research findings. The text should be justified at the right margin, in addition to the left
62 margin. The first few paragraphs of your research article should lay out the motivation and
63 importance of the work and show how the work relates to other recent advances in science
64 or technology. The explanations should be sufficiently broad so that scientists and
65 technologists who are unfamiliar with your subject area can gain an appreciation of how
66 your research results might be applied, if they are further developed and successfully
67 implemented.

68

69 Subsequent paragraphs are indented also. Your introduction should make reference
70 to key publications, emphasizing work that is most relevant to your research results (Bell
71 *et al.* 1954; Chu and Knoll 2003; Mallouk 2004a; Cook 2013). The format of the citations
72 should match the system used in *J. Water Resources Planning and Management*. Notice
73 the form in which different kinds of citations appear at the end of the article (Adams and
74 Spencer 2001; Arunkumar 2002; Bannix *et al.* 2003; Maminski *et al.* 2015; Montoya
75 2015). Within parenthetical citations, references are listed in chronological order, reverting
to alphabetical order when articles appeared in the same year.

76 Italics should be used for Latin words and contractions (*i.e.*, *viz.*, *e.g.*, *et al.*, *etc.*),
77 for journal titles (*J. Phys. Chem.*), and for genus and species (*Pinus taeda*). Make sure to
78 define acronyms and abbreviations when they are first utilized, *e.g.*, scanning electron
79 microscopy (SEM).

80 Manuscripts must be prepared and submitted in one of the following editable
81 formats: MS WORD (“docx” suffix preferred), or Open Office Writer (any version). The
82 purpose of requiring one of these formats is to facilitate the editing process and minimize
83 the time between submission and publication. For purposes of the review process, the
84 editorial staff will convert drafts to portable document format (PDF) files. In cases where
85 the editors recommend a revised version to be submitted, the revised document, once again,
86 needs to be submitted in one of the editable text systems listed.

87 The editors request that the file name begin with the primary author’s surname
88 (family name) or at least the first six letters of that name. You don’t need to worry about
89 the material in the Header and the Footer; the editorial staff will take care of those items
90 after an article has been reviewed, any issues raised by the reviewers have been
91 satisfactorily addressed, and the article has been approved for publication. Authors are
92 responsible for formatting all of the pages, including accurate formatting of the title, author
93 list, the abstract (including indentation), key words, main headings (as provided), optional
94 subheadings, text, figures, graphs, and citations. All of these must match the format of the
95 examples shown in this template article.

96 Except in the case of review articles, it is recommended that introductory material
97 be kept suitably brief, usually between one and three pages. Peer-reviewers who may study
98 your submitted articles will consider whether your article can be improved by shortening,
99 and the editors will act upon such recommendations. An exception will be made in cases
100 where the background material of an article includes a substantial advance in theory that
101 needs to be explained for the first time.

102 It is recommended that the overall length of a research article submitted for
103 publication in *BioResources* be between 6 and 25 pages, still with the understanding that a
104 majority of articles as long as 25 pages probably can be improved in quality by judicious
105 culling and rewriting. The editors reserve the right to accept even longer articles in cases
106 of exceptional quality, novelty, and importance of the work.

107 The whole submission, with the exception of an optional graphic abstract, should
108 be prepared as a single document. Authors who wish to include “supplementary materials”
109 are asked to please include it as an Appendix (see later) in your document.

110 The last paragraph in the Introduction section is where readers will expect to find a
111 “gap statement.” In other words, that is where you explain what piece of important
112 knowledge, in your specific topic area, is not yet known to scholars. This statement may
113 come after one or several paragraphs that describe relevant published work. Readers also
114 may be looking for a “novelty statement,” which (in one to three sentences) explains what
115 aspects of the present work are the main new findings that have not been reported before.

116 117 **Subheading in 12-point Arial Bold**

118 Use subheadings sparingly to set off different subject matter, especially in parts of
119 your article that extend beyond one page in length. Notice that the subheading is in “Title
120 Case,” with major words capitalized.

121 Skip 2 spaces before a major (**ALL CAPS**) heading, and one space after, as shown
122 below.

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125 **EXPERIMENTAL**

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127 **Your Subheading, e.g., Materials**

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129 Provide sufficient detail so that another researcher in your field would be able to
130 repeat the work. Brand names of chemicals and other materials are to be mentioned once
131 in the Experimental section, where appropriate, to make it possible for future researchers
132 to obtain the same starting materials or equipment. Brand names are not to be used
133 elsewhere in the article, including the Abstract or the Conclusions sections. Rather, authors
134 should employ appropriate generic nomenclature, chemical names, or descriptive names.
135 Alternatively, the Experimental section may include a table in which brand name products
136 or devices are assigned suitable generic labels based on their chemical composition. Please
137 see the Editorial Policies on the website regarding the non-commercial, scientific nature of
138 items to be submitted to *BioResources*.

138

139 Please include the supplier's name and location (City, Country) for all specialized
140 reagents, equipment, and software.

140

141 *Your third-level heading*

142

143 In case you want three levels of headings, please use non-bolded italics, with a
144 Times New Roman 12-point font for the lowest level headings. Capitalize only the first
145 word in the heading.

145

146 *Another third-level heading*

147

148 Some articles may have only two levels of headings.

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149 **Equations**

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151 Sometimes it is appropriate to show an equation in the Introduction, Experimental,
152 or Results and Discussion section. Here is an example of Eq. 1,

152

$$E = mc^2 \quad (1)$$

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154 where *E* is energy (kJ), *m* is mass (kg), and *c* is the speed of light (m/s). Note that the
155 variables are in italics; the equation is left-indented with one tab. The units are included
156 when the variable is defined. By contrast, statistical quantities, such as the coefficient of
157 determination R^2 , are not italicized in this journal.

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158 **Test Standards**

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160 All test standards used should be referenced in the Experimental section. In-text
161 citations should include the year of publication. For example, you may choose to cite the
162 TAPPI T222 om-11 standard (2011), ISO 9087 (1998), ASTM D570-098 (2010), and
163 GB/T 2677.20 (1995). See the References Cited for the correct formatting.

163

164 **Your Subheading, e.g., Methods**

165

166 Because *BioResources* is intended for a broad range of readers, authors are
167 encouraged to provide brief background explanations of experimental procedures and
168 theories that, though well known to some, may not generally be well known to a random
169 group of college-educated people having an interest in biomass utilization technology.

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RESULTS AND DISCUSSION

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Results should be presented clearly and concisely. Please use past tense when describing the work that was carried out. For example, “Four milliliters of NaOH solution (0.1 N) was added...”. Present tense can be used when making a statement that the authors believe to have general validity, especially when supported by other publications. For example, “The addition of NaOH increases the swelling of this type of lignocellulosic material (Chu and Knoll 2003).” Please use your best judgment when using other verb tenses to clearly convey your intended meaning.

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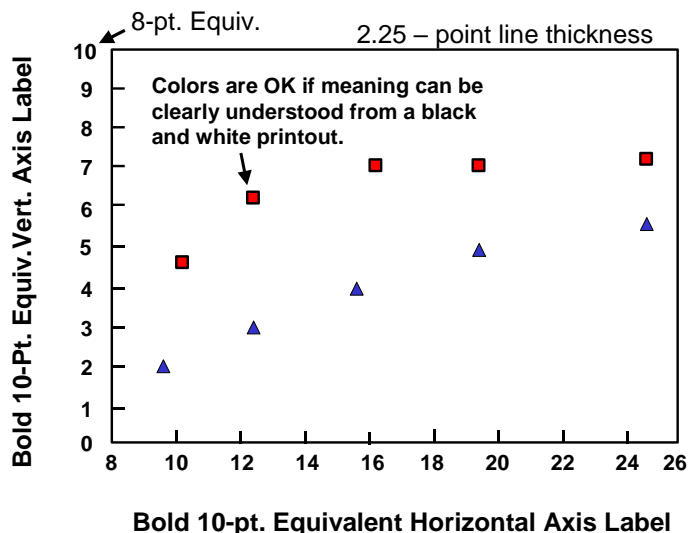
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Note that the term “significant” usually implies statistical significance. If this is your intended meaning when discussing your results, please include a description of your statistical analysis in the Experimental section. Otherwise, please use the terms “noticeable”, “important”, “major”, *etc.*, to indicate important changes in results.



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Fig. 1. Example of a figure, prepared so that the axis labels are near to the size of the surrounding text. Note that the caption is 10-point Arial font with left justification.

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Authors are encouraged to use figures or tables, whichever are the most appropriate, to clearly elucidate the research findings. The graph above (Fig. 1) shows the expected format of plotted information in terms of the following parameters. The vertical and horizontal labels should be prepared in bold Arial font of a suitable size so that they appear in the page view with a size equivalent to a 10-point font or somewhat larger in the final view (noting that this present text is in 12-point Times New Roman font). Number axis labels can appear somewhat smaller, *e.g.*, equivalent to 8-point font. Although colors are encouraged, graphics must be prepared so that symbols and lines show up clearly in a black-and-white printout, and they should remain clearly differentiated from each other in such a format. Regarding the size and positioning of figures, Fig. 1 can be used for general guidance. Figures or tables usually are placed after the points where they are first mentioned in the text. All figures and tables should be mentioned in the text.

The next set of results is reported in tabular form. The following table serves as a representative example of how the heading and the remaining table might appear,

203 depending on the nature of the data. Note that “title case” format, with capitalization of
 204 major words, is used for the table headings. Notes and abbreviations are listed below the
 205 table. Tables usually should fit within the page margins, *i.e.*, they are aligned with text on
 206 both sides. The editors occasionally widen some tables when preparing the PROOF of an
 207 accepted article, when that makes sense. All rows of the table should fit on one page. As
 208 appropriate, results should be discussed and interpreted in the context of other published
 209 work.

210

211 **Table 1.** Example of Tabular Results (12-point Arial here)

Biomaterials In (kg)	Parameter A *	Parameter B	Bioproduct Out (kg)
0.0	8.3	0.2	0.0
30.2	9.7	99.3	0.5
35.8	10-point Arial here	-46.8	0.6
42.6	6.1	5.0	0.7
52.6	7.3	0.1	0.7

* This parameter normalized according to the procedure of Mallouk (2004b)

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213 **Notes about References Cited**

214 Authors are requested to take whatever time is needed to format the References
 215 cited section (at the end of the article) accurately in the format of the examples given.
 216 Authors are encouraged not to use EndNote® or other citation management software. All
 217 of the authors should be listed, unless there are more than ten of them. As can be seen,
 218 there are somewhat different systems used in case of a journal article, a book, a chapter in
 219 an edited book, a paper in a proceedings, or an item from the Internet. The names of
 220 scientific journals either can be spelled out completely or abbreviated using the forms in
 221 common use, but please be consistent. Journal abbreviations can be found at
 222 <https://www.library.caltech.edu/journal-title-abbreviations>.

223 All articles must include digital object identifier (DOI) codes (if they exist) for each
 224 cited work. As shown in the examples, the DOI code goes at the end of the citation record,
 225 using approximately the same format as provided in the Web of Science database. The
 226 Internet can be used to quickly obtain the correct DOI information, if it exists: go to the
 227 website <http://www.crossref.org/SimpleTextQuery/> and follow the instructions given
 228 there. This service is free.

229 Note again, there are two spaces before a major heading.

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232 **CONCLUSIONS**

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- 234 1. Your conclusions should be numbered. Although there is no fixed rule, it is preferred
 235 that the strongest or most general conclusion supported by the research results should
 236 be placed first.
- 237 2. Additional conclusions, especially if they deal with more particular issues of the
 238 research, would be placed later in the list, though authors may use their own discretion.
- 239 3. Speculative statements, opinions, or statements about future work do not belong in the
 240 Conclusions section. Such statements often may be appropriate in the Results and
 241 Discussions section, especially if they can help readers understand the potential
 242 implications of the research findings.

- 243 4. Note that there is a half-space (6 points) between each of the numbered conclusions.
244 There are also two spaces between this text and the major heading that follows. The
245 purpose of this formatting is to enhance readability. The style of the reference cited
246 information approximately matches the style used in the *Journal of Water Resources*
247 *Planning and Management* or *Journal of Water Resources Management*.
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249

250 ACKNOWLEDGMENTS

251
252 The authors are grateful for the support of the U.S. Department of Biomaterials
253 Research, Grant No. 2005-1234.
254

255 REFERENCES CITED

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291 Article submitted:

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294 **APPENDIX**

295

296 This optional section always starts on a fresh page.

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298 Where some other journal have “Supplementary Materials” available through a website,
299 the journal *BioResources* wants any such content to be placed as an Appendix as part of
300 the same document. This content is not expected to receive major editing attention and it
301 is usually not included in figuring out the number of pages when determining the author
302 fee.