



J. Serb. Chem. Soc. 88 (11) S338–S345 (2023)

SUPPLEMENTARY MATERIAL TO

Read this first!

**How to prepare a manuscript for submission to a chemical
science journal**

ANJA DEKANSKI¹ and ALEKSANDAR DEKANSKI^{2*#}

¹Karolinska Institute, Department of Physiology and Pharmacology, Solnavägen 9, Solna,
Sweden and ²University of Belgrade, Institute of Chemistry, Technology and Metallurgy,
Department of Electrochemistry, Njegoševa 12, Belgrade, Serbia

J. Serb. Chem. Soc. 88 (11) (2023) 1175–1188

EXAMPLES OF THE MOST COMMON OMISSIONS AND ERRORS
IN THE TECHNICAL PREPARATION OF MANUSCRIPTS

All Figures and Tables in this Supplemental Material are based on real ones found in submitted manuscripts to several different journals, but the data in them has been changed and some of them modified to highlight the mistakes made. Since they do not represent real results, the sources are not cited.

TITLE AND KEYWORDS

An example of a title which is too long and extensive, where almost all words are repeated as keywords, is shown in Figure 1. A much clearer and shorter title can be: **Trace and selective determination of cobalt(II)**, with the keywords: *Cathodic adsorptive stripping voltammetry; water and salt samples; presence of pyrogallol red.*

* Corresponding author. E-mail: dekanski@ihm.bg.ac.rs

Trace and selective determination of cobalt(II) in water and salt samples using cathodic adsorptive stripping voltammetry in the presence of Pyrogallol Red

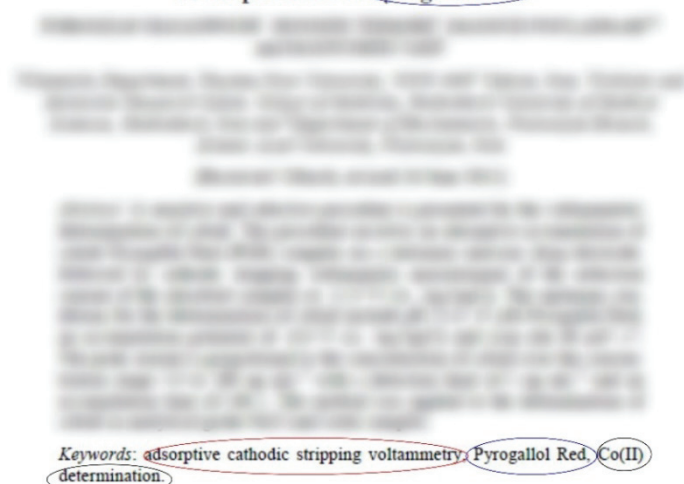


Figure S-1. Poorly created title and wrong choice of keywords

ILLUSTRATIONS

Figure S-2 shows a completely unclear and useless illustration. As the names and units shown on the axes are missing, the reader cannot know what is shown in the figure. Even reading of figure caption can't help with that. Two sets of data are shown, (a) and (b), but without a legend it is not clear which data refer to which set.

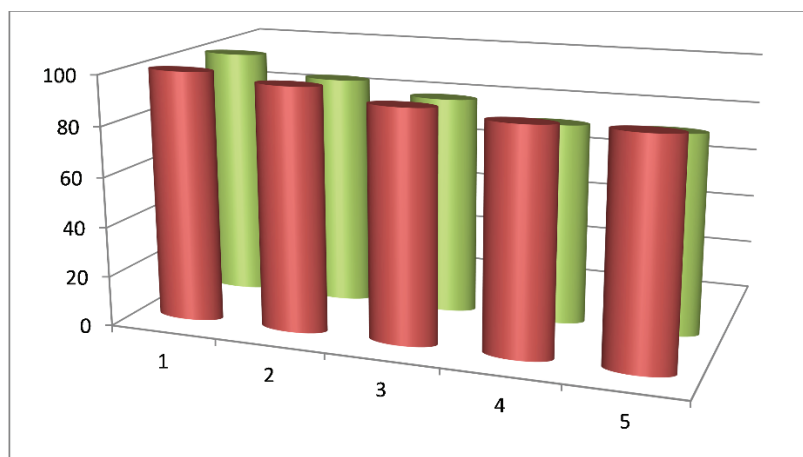


Figure 3. Durability and reusability of (a) KN and (b) SKN coatings

Figure S-2. Unclear and useless illustration

An example of poorly selected ranges of presented data and unclear axis names is illustrated in Figure S-3a. It should look like in Figure 3b. A very common mistake is the one made in naming the y-axis on this graph: logarithmic quantities must always be displayed together with its units, because, for example, it is not the same whether the current density whose logarithmic values are presented, are expressed in A dm^{-2} or in mA cm^{-2} . It is similar with the name of the x-axis, without unit of time the presented results do not make sense.

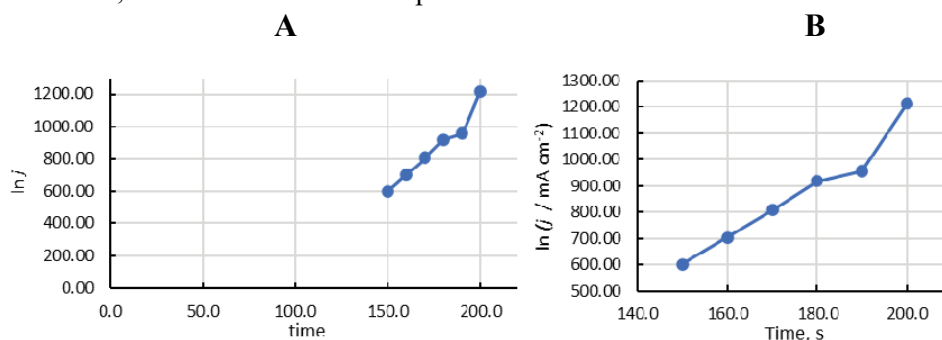


Figure S-3. A – wrong and B – right presentation of the same results

Probably the most common mistakes in articles from chemistry and related fields is the presentation of thermogravimetric analysis (TGA) data. Figure 4 shows three graphs that illustrate those errors^{1,2}. Although these Figures are probably clear to anyone who is even the least familiar with TGA, science implies precise and clear communication, so the y-axes on the graphs are not correct. In Figure 4A, the name of the y-axis is Weight (%), although percent is not a unit of weight. It is obvious that the relative mass loss of the sample during heating is shown on that axis. It would be most accurate if, instead, the mass of the sample, which decreases during heating, is presented on the axis. If it was decided to be a relative change expressed in percentages, the name of the axis should have been: Mass loss, %, with range from 100 to 0 %, not from 0 to 100 %, as it is wrongly shown in Figure 4B a. An alternative is for the axis range to remain from 0 to 100 %, but the axis name to be: Residual mass loss, % or even very precise: $((m - m_t / m)100) / \%$, where m is starting mass of sample and m_t mass of sample at temperature $t / ^\circ\text{C}$. Analogously, the y-axis in Figure 4B b should be, for example: $d(\text{Mass loss}) dt^{-1} / \% ^\circ\text{C}^{-1}$ or $(d(m - m_t / m)100) dt^{-1} / \% ^\circ\text{C}^{-1}$. In addition, x-axis in all figures would be more correct to write as $t / ^\circ\text{C}$ or Temperature, $^\circ\text{C}$.

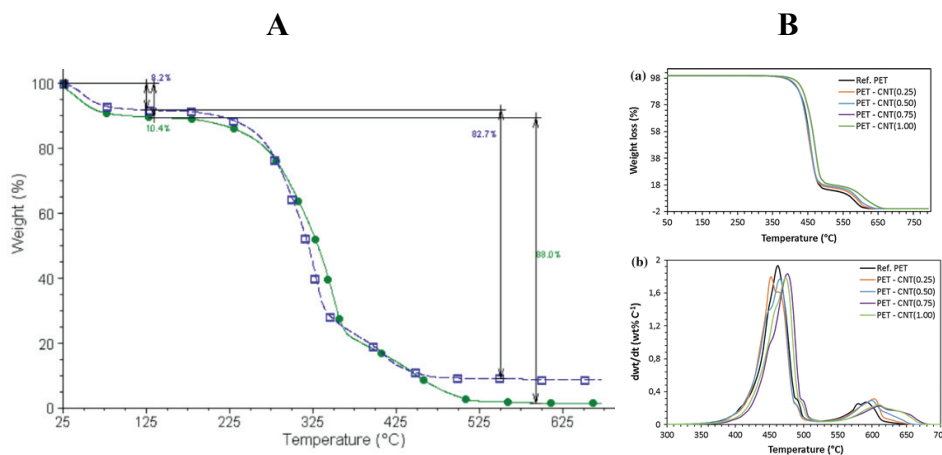


Figure S-4. Examples of poorly named axes on TGA plots

Although electronic publishing made it possible for lower quality and resolution and different formats of illustrations (compared to publishing on paper) to be acceptable, it is necessary that they meet a certain minimum. Figure S-5 shows the same figure in different resolutions. Figure S-5A is .gif format illustration with the resolution of 100 dpi, while Figure S-5B is in .tif format and resolution of 600 dpi. In addition, on the first one, the font size is insufficient for the data from the figure to be easily and clearly read.

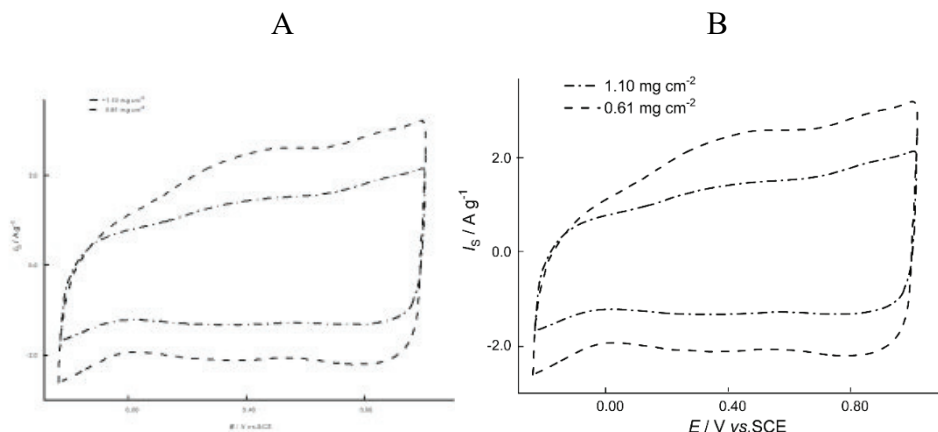


Figure S-5. The same illustration prepared A - poor and B - good

TABLES

Several omissions were illustrated in Table S-I:

1. In all columns, except for the column titled Plasticizer, all values are equal, so the tabular presentation is completely unnecessary. The table can be

replaced with only one sentence in the text, which would list all reactants and their quantities, except for Plasticizer, which should be stated as present in Exp. 18, instead 0.4 l of RA was added in Exp. 19, and 0.4 l of ESO was added in Exp. 20.

2. Although it would probably be clear to the reader that the numerical quantities shown in the table refer to the quantities and volumes of reactants, the names of the columns are misleading. Starch, plasticizer, 15% H₂O₂, catalyst and hydroquinone are not physical quantities and cannot have any numerical value. These are their masses or volumes, so the column headings should be as, for example, in Table S-II.

3. In table caption it is stated that the reaction conditions are also shown, but there is no such data, the table only contains the quantities of reactants. Therefore, the title of the table should be as in Table S-II

Table S-I. Quantities of reactants and reaction conditions used in experiments

Sample	Starch, [kg]	Plasticizer, [l]		15% H ₂ O ₂ , [l]	Catalyst, [kg]		Quinone, [kg]
Exp 18	200	-		20	Cu citrate	0.03	0.4
Exp 19	200	RA	0.4	20	Cu citrate	0.03	0.4
Exp 20	200	ESO	0.4	20	Cu citrate	0.03	0.4

Table S-II. Quantities of reactants used in the experiments

Sample	Mass, kg			Volume, l	
	Starch	Catalyst (Cu-citrate)	Quinone	Plasticizer	10 % H ₂ O ₂
Exp 18	200	0.03	0.4	-	20
Exp 19	200	0.03	0.4	0.4 RA	20
Exp 20	200	0.03	0.4	0.4 ESO	20

MANUSCRIPT PREPARATION

A drastic example of ignoring or not reading the Instructions for Authors and not knowing the elementary principles of good writing of a scientific article is illustrated in Figure S-6.

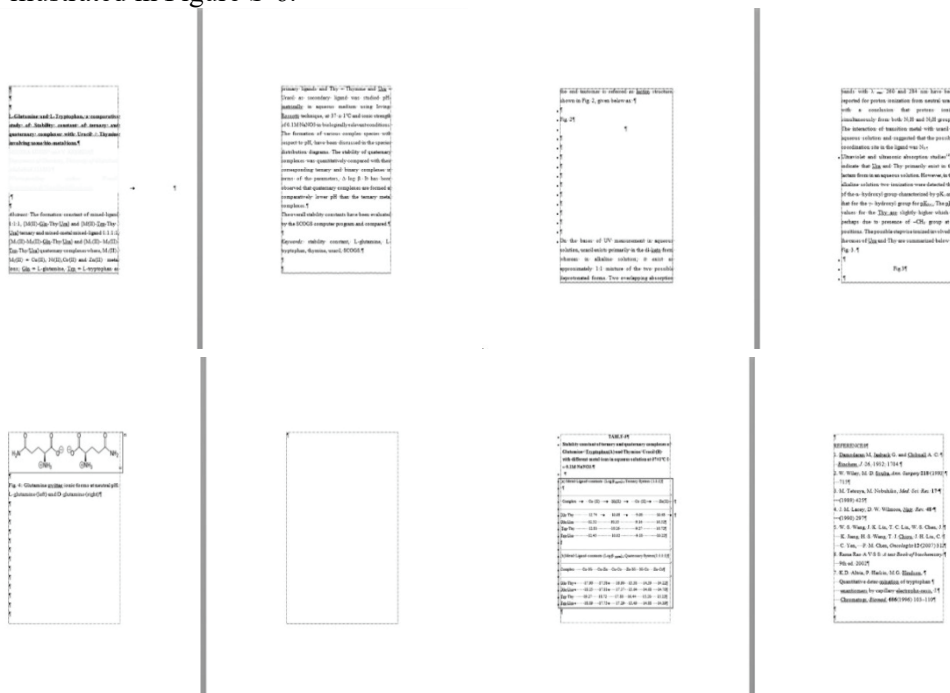


Figure S-6. Screenshots of eight pages of a manuscript submitted for publication in a scientific journal

There are so many errors on the presented 8 pages that it is difficult even to count them. From clearly wrong margins, through unnecessary blank pages and the use of consecutive spaces and new lines to format text and tables, to an incorrectly and inconsistently formatted reference list. For such a new submission, one can expect nothing more than desktop rejection, even without reading the article itself.

ACQUIRING ACADEMIC SKILLS AT FACULTIES IN THE FIELD OF CHEMISTRY AND CHEMISTRY-RELATED FIELDS IN SERBIA

Table S-III provides an overview of the courses for acquiring academic skills at doctoral studies at faculties in the field of chemistry and related sciences in Serbia. The data were taken from the official websites of higher education institutions, and the links to them are listed in the table.

Table S-III. Courses of academic skills in doctoral studies at faculties in the field of chemistry and related sciences in Serbia

Faculty	Course name	URL
Faculty of Chemistry, University of Belgrade	Writing and publishing scientific papers, compulsory	https://www.chem.bg.ac.rs/predmeti/773A2-en.html ,
Faculty of Technology and Metallurgy, University of Belgrade	Methodology of scientific research, elective	http://www.tmf.bg.ac.rs/en/fis/karton_predmeta/22DMNIR#gsc.tab=0
Faculty of Pharmacy, University of Belgrade	Methodology and ethics in scientific research, 1st year, compulsory Communication and presentation skills, 2 nd year, compulsory	http://www.pharmacy.bg.ac.rs/files/DAS/2021/Table%20of%20subjects.pdf
Faculty of Physical Chemistry, University of Belgrade	There is no course, but the study description states that students will be able to: “Communicate the achieved results at scientific conferences, publish them in renowned scientific journals, register them as patents”	https://www.ffh.bg.ac.rs/%D0%BE%D0%BF%D1%88%D1%82%D0%B5-%D0%B8%D0%BD%D1%84%D0%BE%D1%80%D0%BC%D0%B0%D1%86%D0%B8%D1%98%D0%B5-3/
Faculty of Agriculture, University of Belgrade	Methods of scientific research work, compulsory or elective, depending on the module.	https://agrif.bg.ac.rs/sr/studije/doktorske-akademske-studije
Technical Faculty in Bor, University of Belgrade	It does not exist as a compulsory course, the list of elective courses is not available	https://www.tfbor.bg.ac.rs/file/s/doc/studijski-programi/TI/2019/das_ti_nastavni_plan.pdf
Faculty of Sciences, University of Novi Sad	Scientific research work, compulsory	https://www.pmf.uns.ac.rs/en/studies/study-programs/phd-in-chemistry/
Faculty of Technology, University of Novi Sad	Methodology in scientific research, compulsory	https://www.tf.uns.ac.rs/en/studies/doctoral-academic-studies.html
Faculty of Agriculture, University of Novi Sad	Methods of scientific work, compulsory	http://polj.uns.ac.rs/sites/default/files/upload/DAS%20Agronomija%202021_1.pdf
Faculty of Pharmacy, University Business Academy, Novi Sad	Methodology and ethics in scientific research, compulsory Writing a scientific paper, compulsory	https://faculty-pharmacy.com/program/doktorske-akademske-studije/
Faculty of Sciences, University of Kragujevac	Methodology of scientific research work in chemistry, compulsory	https://www.pmf.kg.ac.rs/pub/f653e65df59d87b1b5bccff88397ad99_12072016_115210/dokproghemija.pdf
Faculty of Sciences, University of Niš	Does not exist	http://wpresspmf.pmf.ni.ac.rs/?page_id=4066&lang=en

Faculty of Technology, Leskovac University of Niš	Methodology of scientific research work, elective Presentation of scientific results, elective	https://www.tf.ni.ac.rs/studiranje/doktorske-akademskestudije/predmeti-das/
Faculty of Sciences, University of Priština	Methodology of scientific research work in chemistry, elective	https://www.pmf.pr.ac.rs/doktorske/hemija
Faculty of Technical Sciences, University of Priština	Methodology of scientific research work, compulsory	https://ftn.pr.ac.rs/wp-content/uploads/2022/05/Nastavni_plan_tehnolosko_inzinjerstvo_DAS.pdf
