# Wprowadzenie do komunikacji naukowej

Struktura artykułów cz. 3

# Podziękowania

- osoby, które przyczyniły się do powstania artykułu
- instytucje finansujące badania

w niektórych czasopismach informacje o finansowaniu są w innym akapicie

# Bibliografia

## Styl Chicago:

Probst, Philipp, Anne-Laure Boulesteix, and Bernd Bischl. "Tunability: Importance of hyperparameters of machine learning algorithms." J. Mach. Learn. Res. 20, no. 53 (2019): 1-32.

Journal paper: Last Name, First Name. “Article Title.” *Journal Name* Volume Number, no. of issue (Date Published): Page-Range. DOI address.

Book:Last Name, First Name. *Title of Book.* Publisher City: Publisher Name, Year Published.

https://www.bibme.org/chicago

## Styl Harvard

Probst, P., Boulesteix, A.L. and Bischl, B., 2019. Tunability: Importance of hyperparameters of machine learning algorithms. *J. Mach. Learn. Res.*, *20*(53), pp.1-32.

Journal: Author(s) surname, Initial(s) Year of publication. Article title, *Journal title*, vol., no., pp.

Book: Author surname(s), initial(s) Year of publication. *Title*, Publisher, Place of publication.

# Cytowanie - LaTeX i bookdown

- plik .bib
- LaTeX :

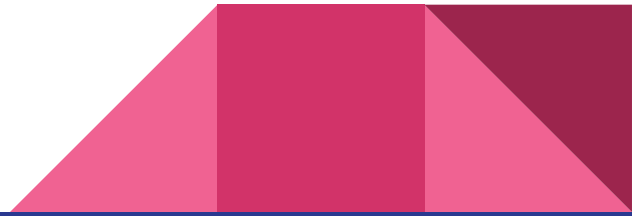
  odwołanie w nawiasie: \citep{key}

  odwołanie bez nawiasu \citet{key}

- bookdown:

  odwołanie w nawiasie: @key

  odwołanie bez nawiasu: [@key]



# Menadżer bibliografii

- Mendeley
- Zotero
- Endnote, citavi (płatne)

# Check list

- Include citations that provide sufficient context to allow for critical analysis of this work by others.
- Include citations that give the reader sources of background and related material so that the current work can be understood by the target audience.
- Include citations that provide examples of alternate ideas, data, or conclusions to compare and contrast with this work, if they exist. Do not exclude contrary evidence.
- Include citations that acknowledge and give credit to sources relied upon for this work.
- Are the citations up to date, referencing that latest work on this topic?
- It is the job of the authors to verify the accuracy of the references.
- Avoid: spurious citations (citations that are not needed but are included anyway); biased citations (references added or omitted for reasons other than meeting the above goals of citations); excessive self-cites (citations to one's own work).

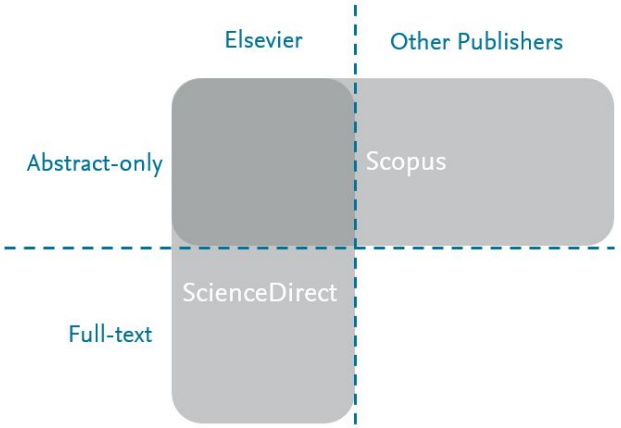
**"Literature Cited Checklist" from: How to Write a Good Scientific Paper. Chris A. Mack. SPIE. 2018.**

# Bazy danych w których szukać artykułów

- IEEE Xplore Digital Library
- ScienceDirect, Scopus (Elsevier)
- Web of Knowledge
- PubMed i PubMed Central

  ...

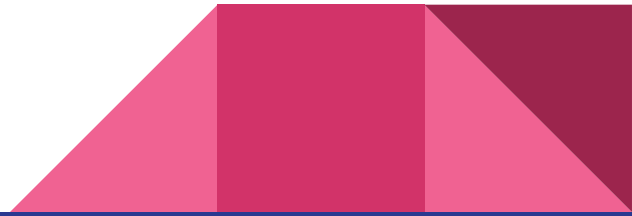
- preprint: arxiv i medrxiv
- ResearchGate
- Search engine: Google Scholar



# Praca domowa

W temacie Waszych projektów znajdźcie artykuły, które warto będzie zacytować we wprowadzeniu w Waszym artykule (mogą to być prace, które reprodukujecie lub prace, w których zostały opublikowane metody, które wykorzystujecie).

Dla wybranych czasopism stwórzcie plik .bib.

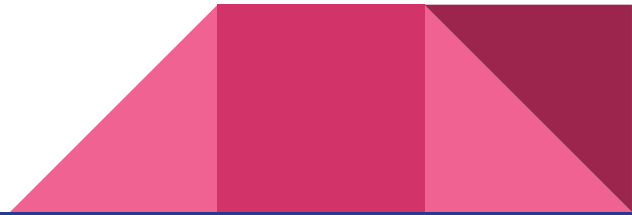


# Styl pisania

- Postaraj się pisać tak, aby czytelnik nie musiał wracać do raz przeczytanego zdania.
- Konstrukcja zdania powinna jasno wskazywać na związek podmiotu i orzeczenia: *X zrobił Y* lub *A jest B*. Zdania  powinny zaczynać się od najważniejszej informacji.
- Podmiot: *we* lub *I*

# Konstrukcja zdań

1) **Undoped zinc oxide**, due to the presence of oxygen vacancies and interstitial zinc atoms, **is** an n-type semiconductor.
2) **Undoped zinc oxide is** an n-type semiconductor due to the presence of oxygen vacancies and interstitial zinc atoms.
3) Due to the presence of oxygen vacancies and interstitial zinc atoms, **undoped zinc oxide is** an n-type semiconductor.



# The secret to using tenses in scientific writing

## 1 Introduction

Use the **simple present tense** for -

- your objectives behind conducting the study
- literature that is already known about the topic
- facts that are generally true and unlikely to change [Ex: The Earth *revolves* around the sun.]
- results of past research that you believe to be true and relevant to your present research

Use the **simple past tense** for -

- facts that were once believed to be true but have since been revoked [Ex: Bats *were thought* to be blind.]
- describing the methods of previous studies

## 2 Literature Review

Use the **simple past tense** to talk about existing research on the topic. But sometimes you may need to use a combination of tenses.

- Use the **past tense** - to focus on the study itself or on the authors of the study
- Use the **present tense** - to share your own views about the study in question
- Use the **present perfect tense** - to cite a previous study that is fairly recent [Ex: Recent studies *have shown* that...], or to make generalizations about past research in an area [Ex: Several researchers *have studied* these stimuli....]

## 3 Materials & Methods

- Use the **simple past tense** - to describe your actions i.e. what you did and how you did it, as these actions have already been completed at the time of writing the research paper.
- Use the **past perfect tense** - only as needed, to describe some earlier stages of the experimental procedure [Ex: Subjects who *had been* assigned to the control group were given a placebo instead of Drug A.]

## 4 Results Section

- Use the **past tense** - to describe experiments that have already been completed at the time of writing the paper
- Use the **present tense** - to refer to tables, figures & graphs that you use to present the results [Ex: Fig. 3 *shows* that...]
- You could also use it to talk about your research paper as a whole [Ex: Section 4.1 *discusses*...]

## 5 Discussion Section

- Use the **past tense** - to summarize findings
- Use the **present tense** - to interpret the results, discuss the significance of the findings or present your conclusions
- Use the **future tense** - to make recommendations for further research or to indicate a future course of action based on the results of your paper

ent-tenses-in-research-writ

https://www.editage.com/insights/the-secret-to-using-tenses-in-scientific-writing

# Strona bierna czy czynna

- Czy ważne jest kto wykonywał dany proces? Strona bierna kładzie większy nacisk na samą czynność lub obiekt operacji.
- Czy przez stronę bierną nie traci się *flow*: nominalizacja
- Czy zdania w stronie biernej nie są za bardzo skomplikowane i za długie
- Strona bierna sprzyja *dangling modifiers*

https://sites.duke.edu/scientificwriting/passive-voice-in-scientific-writing/

# Ponglish

- … allows to measure …  (allow potrzebuje dopełnienia)
- … permitting to measure ...
- … makes it possible to record ...

  To measure the spectral characteristics….

  The image of deformation is recorded by/with …

- **The obtained results** indicate the possibility…

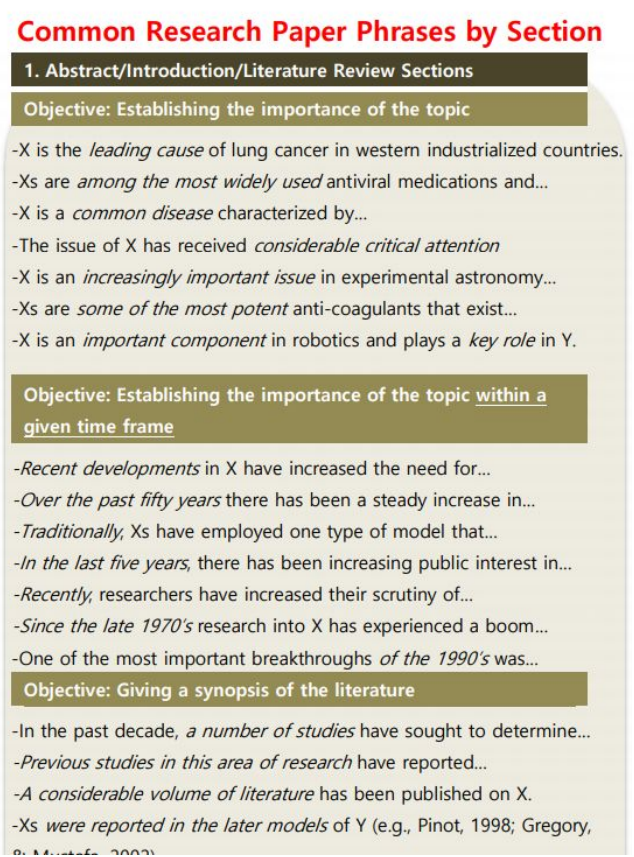
-

- In the measures spectra can be noticed two things: ...
- The main aim of this article is concentrating on factors that are connected with problems of overpopulation…
- Thanks to the wide range of spectroscopic techniques for the testing of multilayer structures, their parameters can be increasingly more precisely measure.
- The investigation concerned the terahertz radiation transmission through helical structures.

# Zwroty

- transition terms- przykłady
- przydatne wyrażenia - przykłady

przykłady str. 59-63



## Common Research Paper Phrases by Section

**1. Abstract/Introduction/Literature Review Sections**

**Objective: Establishing the importance of the topic**

-X is the *leading cause* of lung cancer in western industrialized countries.
-Xs are *among the most widely used* antiviral medications and...
-X is a *common disease* characterized by...
-The issue of X has received *considerable critical attention*
-X is an *increasingly important issue* in experimental astronomy...
-Xs are *some of the most potent* anti-coagulants that exist...
-X is an *important component* in robotics and plays a *key role* in Y.

**Objective: Establishing the importance of the topic within a given time frame**

-*Recent developments* in X have increased the need for...
-*Over the past fifty years* there has been a steady increase in...
-*Traditionally,* Xs have employed one type of model that...
-*In the last five years*, there has been increasing public interest in...
-*Recently,* researchers have increased their scrutiny of...
-*Since the late 1970's* research into X has experienced a boom...
-One of the most important breakthroughs *of the 1990's* was...

**Objective: Giving a synopsis of the literature**

-In the past decade, *a number of studies* have sought to determine...
-*Previous studies in this area of research* have reported...
-*A considerable volume of literature* has been published on X.
-Xs *were reported in the later models* of Y (e.g., Pinot, 1998; Gregory,

*determine...*
-The *aim* of this survey has been *to try and ascertain* what...
-The *goal* of this study is to *investigate the differences between....*
-The purpose of this research is *to examine the way in which ...*

**Objective: Identifying the research question or hypothesis**

-The *central question* in this dissertation *examines ...*
-This study *aimed to address* the following questions:
-In particular, *this study will examine* four main research questions:
-A crucial research question of this study was thus whether...
-The *hypothesis* that will be tested is...

**2. Methods & Materials Section**

**Objective: Giving a synopsis of methods and sources of data**

-This study was investigative and exploratory in nature.
-The study was conducted in the form of a series of experiments, with data being gathered via...
-This research takes the form of a case study of the...
-Using quantitative measures, I attempt to examine the...
-Both qualitative and quantitative methods were used in this study.

**Objective: Explaining why a method was used or rejected**

-*A longitudinal study was used* to allow a wider sample of...
-*A qualitative method* was avoided to ensure the accuracy of...
-However, *there are certain drawbacks associated with the use of...*
-The X approach *has a number of useful features*, including...

**Objective: Describing the process using sequential words/adverbs**

-*In order to identify* the most responsive traits, the subjects were given...

# Ćwiczenia

- spróbuj zastąpić czasownik *be*

  The experiment was … -> The experiment shows …

- zamiennie używaj strony biernej i czynnej
- sprawdź czy nie nadużywasz nominalizacji (stabilization,  induction). Dobrze użyć w każdym akapicie co najmniej jedno zdanie z *ludzkim podmiotem*

# Ćwiczenia

- postaraj się ożywić zdania, szczególnie te z abstrakcyjnymi podmiotami używając ciekawych, mocnych orzeczeń

Light- driven robots **merge** microrobotics and photomechanics in soft materials.

- Jeśli w tekście jest zbyt dużo zaimków this, it that, spróbuj używać ich z następującym po nich rzeczownikiem
- postaraj się wyeliminować zdania wielokrotnie złożone

Experimental results that demonstrate the effect that can influence processes that lead to material deformation.

# Narzędzia

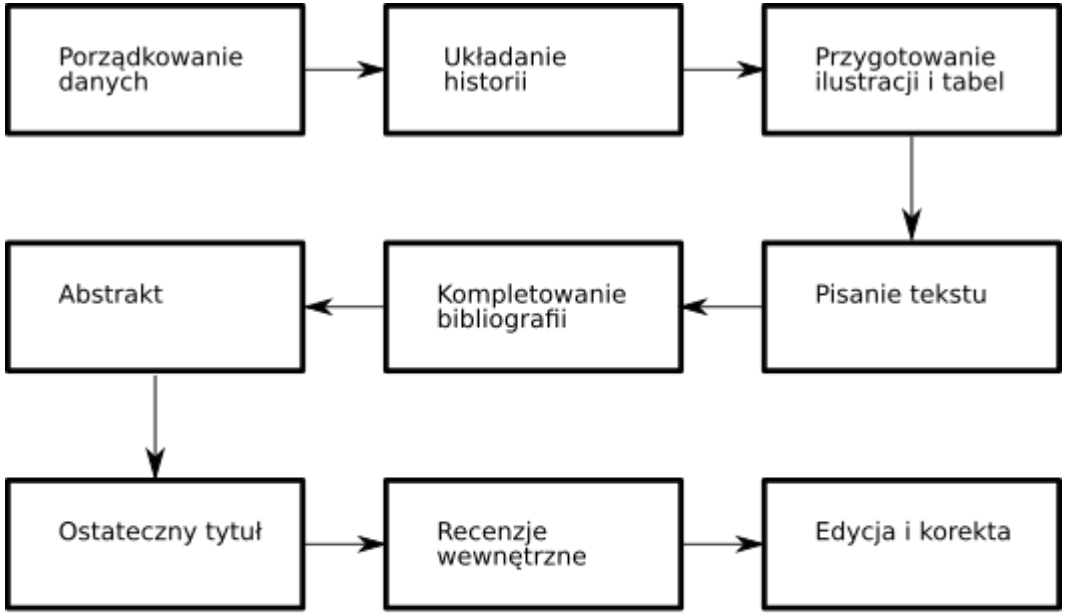
- grammarly
- słownik kolokacji
- słownik synonimów

# Praca domowa

Przeanalizujcie fragment tekstu i zobaczcie

- jaka jest odległość pomiędzy podmiotem i orzeczeniem
- jak wprowadzone czy często i jak używane są transition terms

# Kolejność pisania sekcji artykułu


Porządkowanie danych
Układanie historii
Przygotowanie ilustracji i tabel
Pisanie tekstu
Kompletowanie bibliografii
Abstrakt
Ostateczny tytuł
Recenzje wewnętrzne
Edycja i korekta

# Kolejność pisania sekcji artykułu

1. Przygotowanie do publikacji - generowanie wyników + przygotowanie tła naukowego np. zapisywanie referencji
   - zapisywanie wszystkich ustawień aparatury
2. Rezultaty (można przygotować sobie pierwszą wersję abstraktu)
3. Metody
4. Dyskusja
5. Wprowadzenie
6. Abstrakt (ostateczny)
7. Tytuł (ostateczny)

# Przygotowanie do procesu publikacji

1. Od początku myślimy co chcemy pokazać w artykule - czasami najpierw powstaje wniosek grantowy, który jest zarysem eksperymentu i artykułu
2. O artykule myślimy na końcu wykonaniu eksperymentu

## Wybór czasopisma

- Impact factor
- punkty z listy ministerstwa