

Section 2. Introduction as an IMRD component

Unit 2. Introduction: Grammar peculiarities

Outline

- Tense pairs
- Signalling language
- Passive/active use

Tenses

The synthesis of high-strength alloys from copper and zinc

Introduction

1 Copper-zinc alloys have gained significant attention in recent years due to their exceptional strength and corrosion resistance, which offer important benefits in various industrial applications. **2** These alloys are produced by combining copper and zinc through a process of metallurgy. **3** They have potential uses in the biomedical field¹ and have also been investigated as potential engineering materials.^{2,3} **4** However, the alloys have been found to be too brittle under impact to be used commercially.⁴ **5** One way to improve the mechanical properties of alloys is to incorporate other elements into the mixture⁵ and there has been extensive research regarding the modification of copper-zinc alloys. **6** For example, Smith et al. showed that copper-zinc alloys could be prepared using blending techniques⁶ and more recently, Hill established the toughness of such alloys.⁷ **7** However, although the effect of the added elements on the mechanical properties of the alloys was demonstrated over two years ago,⁸ little attention has been paid to the selection of appropriate elements. **8** The present paper presents a set of criteria for selecting such elements. **9** On the basis of these criteria, it then describes the preparation of a set of alloys using copper and a nickel alloy (Ni-Cu). **10** This combination of two distinct metals formed a novel alloy in which the incorporation of Ni-Cu significantly increased strength and ductility.

Which tenses are used?
Why?

Tenses

The synthesis of high-strength alloys from copper and zinc

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Examples from the model:

- 1** exceptional strength and corrosion resistance, which offer important benefits in various industrial applications.
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Which sentence is stronger?

- a. It was found that the pressure increased as the temperature increased, suggesting that temperature played an important role in the process.
- b. It was found that the pressure increases as the temperature increases, suggesting that temperature plays an important role in the process.

Most common tenses in the introduction

- Present Simple = **accepted facts and truths**
- Present Continuous = **trends and situations that are evolving now, or programmed future events**
- Past Simple = **the findings are linked only to the writer's own research**
- Present Perfect = **sth is considered more relevant to the situation now**

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Past Simple —————> Present Perfect

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Tense choice changes the function of information

Signalling language

Repetition:

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Summary words:

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Sentence connectors

- **Cause:** as, because, since, due to (the fact)
- **Result:** as a result, therefore
- **Contrast/Difference:** however, but, while
- **Unexpectedness:** although, in spite of/despite, nevertheless
- **Addition:** also, in addition, secondly

Passive/active

Can writers use «I» or «We»?

Referring to people in general — use **it** (It is known/
thought that)

Mentioning your own contribution — use **we**

Note: this is subject and journal specific

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Summary

- Introduction usually employs three tenses
(Present Simple, Past Simple, Present Perfect)
- Tense choice is meaningful
- Signalling is important
- Passive can be used
- Active is more preferable for preventing confusion