学术论文的语言表达

征求意见稿

● 总则

语言风格：清晰流畅的书面语言。

注意向已发表的文章学习语言，专业术语必须从该领域的文献中学习，避免自创的新奇语句。

● 应注意的问题

一．时态

☆ 时态是个比较复杂的问题，虽然有一般的规则，但往往在实际文章中很难把握。总体的规则已在前边讲过，需要重申的是在同一段落中要避免时态跳跃（详见学术论文的写作）。

☆ 最常见的描述一般现象的时态是一般现在时，有时也用一般过去时，或一般将来时。

☆ 需要注意的语法：

In recent years 作时间状语时，通常要用完成时。

In recent years, Plesch and coworkers **have concluded** that many so-called cationic polymerizations do not proceed through intermediates of an ionic nature.

二．数

☆ 数也有其复杂化，特别是在学术论文里，有是很难顾及数上的逻辑。但一般不将逻辑上的问题视为语法错误。只须注意在一个句子中的数和谓语动词的统一即可。

☆ 以下是需要注意的语法：

◆ 不规则变化的单复数：

单数	复数	
criterion	criteria	依据
phenomenon	phenomena	现象
medium	media	介质
radius	radii	半径
index	indices	指数
appendix	appendices	附录
stimulus	stimuli	刺激
basis	bases	基础

synthesis	syntheses	合成
matrix	matrices	基体

Novel biomaterials with improved, specific biological action are being developed using polymers that are responsive to environmental **stimuli**.

◆ 一些数有特殊性的名词：
data, kinetics 通常作复数名词

research, work: 不可数名词

The **data** in Table 1 **are** obtained from the reactions at different temperatures.

The **kinetics** of polymerization within each droplet **are** the same as those for the corresponding bulk polymerization.

Much research has been done to redirect the tropism of retroviruses by engineering the envelope glycoprotein.

Most research on poly(ortho esters) **has** focused on the synthesis of polymers.

◆ 一些结构的数 <主谓的统一>：
one of 复数名词：单数
none of 复数名词：复数
none of 单数名词/不可数名词：单数
no 复数名词：复数
no 单数名词/不可数名词：单数
a kind of 单数名词：单数　　this/that kind of 单数名词：单数
these kinds of 复数名词：复数
复数名词 of this/that kind：复数
sort 与 kind 类似
a type of 单数名词：单数
a series of 复数名词：复数
a class of 复数名词：复数
the number of 复数名词：单数
a number of 复数名词：复数

Ara-C **is one of most important** antitumor agent**s**, especially used in the treatment of various leukaemias.

One of possibilitie**s** for enhancing the pharmacological properties **is** to link it to a carrier.

Biocompatibility is **one of** the main **criteria** for the selection of a particular biomaterial.

Controlled drug delivery technology represent**s** **one of most** rapid advancing area**s** of science in which chemists are contributing to human health care.

Several model**s** have been proposed but **none appear** to be generally applicable.

None of the presently used **ones are** applied rigorously.

Thus far **no studies have** conclusively demonstrated long-term value of any of the cardiac gene therap approaches.

This type of termination **is** often referred to as spontaneous termination.

A number of polymer backbone**s** **that are** potentially degradable **are** detailed in the text.

The number of mechanism**s** which **have** been proposed to explain the stereopecificity of Ziegler-Natta catalysts.

* The number of 复数名词: 整个做主语时谓语应为单数; 但此句的动词 have 是从句的谓语，而从句是形容 mechanisms.
  在其它的从句谓语中也是同样。如: **One** of the mechanism**s** **which have** been……

A series of telomer**s** reported in table 1 **were** then synthesized.

A diverse range of mechanism**s** **have** been developed.

Polymer**s** **are** a promising **class** of biomaterial**s** that can be engineered to meet specific end-use requirements.

The most important class of poly(amide**s**) for controlled release **are** the poly(amino acids).

The majority of poly(anhydride**s**) **are** prepared by melt-condensation polymerization.

A wide variety of natural and synthetic polymer**s** **have** been used to fabricate tissue-engineering matrices.

◆ 后面通常要用复数名词（对可数名词而言）:

various different
most all many several
one of many of
kinds of
a number of the number of
a (wide) variety of a class of
a series of a wide range of

Dozens of different type**s** of receptor**s** **are** present on the average mammalian cell.

In **a number of** special application**s** (e.g. contact lens**es** and skin-grafting material**s**), additional requirement**s** such as transparency should be considered when selecting **a** polymer.

Many of these transmembrane protein**s are** receptor**s**.

Some polymer**s are** highly crystalline primarily because their structure is conductive to packing, while **others are** crystalline primarily because of the secondary forces. **For still other** polymer**s**, both factors may be favorable for crystallization.

◆ 形容可数名词的量词：

a few　　many　　a number of

形容不可数名词的量词：

a great/small/certain amount of　　a great/good deal of

形容可数和不可数名词均可的量词：

a lot of　　lots of

Although **a few** polymer**s** may be completely amorphous and a few completely crystalline, **most** polymer**s are** partially or semi-crystalline in character.

The use of IPNs has received **a great deal of attention** in recent years and different kind**s** of IPN have been synthesized with different composition**s**.

The major amount of work on size distributions **has** been on polyesters and polyimides.

A sizeable amount work has been published on the copolymerizations of various cyclic monomers.

◆ 以下结构的谓语的数：

由前一个决定：

, as well as……

由较靠近谓语动词的决定：

not only……but also……

either……or……

neither……nor……

三．冠词

☆ 冠词是最易犯错误的地方，一定要注意。否则编辑的负担极重，因为每句话都会用到冠词。最普通的规则如下：

单数名词前一般要加冠词：a , the 等； 但有些情况可不加。

复数名词前一般可不加冠词；也可加：the, these, those.

The molecular weight of **a** polymer is of prime importance in **its** synthesis and application.

The rate constant can be expressed by **an** Arrhenius type relationship
$K = A\ e^{-E/RT}$
Where A is **the** collision frequency factor, E **the** Arrhenius activation energy, and T **the** Kelvin temperature. **A** plot of lnK versus 1/T allows **the** determination of both E and A from **the** slope and *intercept*, respectively.

When **a** water-insoluble or only slightly water-soluble monomer is added, a very small fraction dissolves and goes into solution. A large but still small portion of **the** monomer enters **the** interior hydrocarbon part of **the** micelles. The largest portion of **the** monomer is dispersed as monomer droplets.

被修饰的名词前要加 the:

There has been a rapidly increasing effort in the last ten to fifteen years toward **the synthesis of new polymers** with markedly higher temperature resistance than those previously available.

The catalysts usually must be prepared at the low temperatures since most of them become heterogeneous when prepared at or warmed up to **the temperatures above about -40℃**.

四．从句，分词，不定式
☆ 这些是写作时常用且必须用到的结构，一定要掌握。在学术论文中，从句分词不定式通常用来作修饰。

Applications in the relatively new field of tissue engineering, **where polymers are used to assist regeneration of three-dimensional tissue structures**, are more and more integrated with biological demands.

There are three general synthetic approaches **that have been used to produce polymers with increased thermal stability**.

If certain symmetry requirements are met, the molecules are able to pack into an ordered, lattice arrangement and crystallization occurs. The temperature **at which this occurs** is Tm.

There are at least two mechanisms **through which the infectivity of a vector can be blocked**.

Biodegradable polymers **containing 、hydrolysable 〃groups in their chains**, which are susceptible to biodegradation to low molecular weight, nontoxic products, have also been considered for controlled drug delivery systems.

Polymers **possessing high strength, solvent and chemical resistance, and serviceability at high temperatures** would find a variety of uses.

The **challenge facing** cell and molecular biologists is to decipher how cellular events occur.

A general problem **encountered in many of the polymerization systems** has been a difficulty in obtaining polymers of sufficiently high enough molecular weight to have reasonable strength properties.

Another approach **to obtain rigid polymer chains** is by the synthesis of spiro polymers.

五．标点：

☆ 英文中一句话结束要用句号，注意避免过长的句子，这点与汉语中常用逗号的习惯不同。

☆ 请注意以下结构的标点：

…… such as A and B ……

…… such as A, B and C ……

…… , such as A, ……

…… , for example, ……

…… , for example ……

…… ,e.g., ……

…… ,i.e., ……

……, respectively.

六．掌握一些学术论文常用的短语、结构可大大降低写作的难度：

In order to **meet all of these criteria**, the vector must deliver the gene accurately.

To **overcome this problem**, it would be advantageous to pseudotype lentiviral vectors with targeted MLV envelopes.

Besides identifying suitable proteases **for** targeting, **the success of** this protease-targeting strategy **relies on the accessibility of** the linker to protease cleavage.

We **have focused our investigations on** the in vitro and in vivo biological response of a mouse cell line.

On the contrary, the homotelomer derivative 11 exhibits no substantial loss of cytotoxicity compared to free Ara-C.

After more than three decades of development, **in which** numerous polymers have been used to replace body parts, clinical **success is still relatively rare**.

In some cases, polymeric materials for drug delivery must **satisfy additional requirements**, such as environmental responsiveness (e.g. pH- or temperature dependent phase or volume transformations.)

Owing to the nature of these interactions, surface modification strategies have been used to optimize specific surface properties.

Several approaches to surface modification exist. **In general**, both chemical and physical modifications of the polymeric surface may significantly increase the biocompatibility.

A host of new polymers have been developed **specially for** surgical applications, **particularly** drug delivery.

For roughly the past three or four decades, biology **has been undergoing a revolution toward** a quantitative mechanistic understanding of cell and organism behavior.

They offer **improved** mechanical **properties** and **ease** of synthesis.

Specific gel systems **are described in more detail** in the **following sections**.

Perhaps **the strongest motivation for** polymeric delivery systems **is that** many of the **more recently discovered** molecules require delivery at a very localized level due to their mechanism of action.

A particular challenge in addressing materials **issues** for tissue engineering is that the biological processes **are not yet understood well enough to allow** a clear set of design parameters to be specified a priori.

Over $20 billion is spent annually on therapeutic management of CHF treatments alone but the overall **outcome is not highly successful**.

Unless tissue-specific gene targeting techniques **have been** developed, intravenous injection of recombinant viral vectors is unlikely to be the choice of gene delivery due to systemic infection and low efficiency of gene transfer.

In most instances, there is some molecular weight range for which a given polymer property will be optimum for a particular application.

The control of molecular weight **is essential** for the practical application of a polymerization process.

Solid polymers **differ from** ordinary, low molecular weight compounds in the nature of their physical state or morphology.

On the other hand, the highly flexible chain leads to very low value**s** of Tg and Tm.

Molecular symmetry of polymer chains also **plays an important role** in determining Tg and Tm.

The reason for this is that the extent of crystallinity developed in a polymer is both kinetically and thermodynamically controlled while the melting temperature is only thermodynamically controlled.

This explains clearly why even the moderately high degree of syndiotacticity **present in** a polymer **such as** PMMA **is not enough to allow it to** crystallize extensively.

Polymer**s vary widely** in their mechanical behavior depending on the degree of crystallinity, the degree of crosslinking, and the values of Tg and Tm.

The general order of thermodynamic stability of different sized ring structures **is**, thus, given by 3,4,8 to 11 < 7,12 and larger < 5 < 6

There are two important aspects with regard to the control of molecular weight in polymerizations.

The rate constants for these reactions **are orders of magnitude greater than** those for the corresponding reactions of the diacid or diester reactants.

The discussions until this point have been **concerned with** the polymerization of bifunctional monomers to form linear polymers.

Of the polymers discussed in the previous section, only the polyimides have been far into the desired …

This **corresponds to a two- or three-fold** rate increase for a 10°C temperature increase.

While the ΔH values **vary over a wide range** for different monomers, the ΔS values **are insensitive to** structure –being relatively constant within the range of 20-30cal/K • mol.

Some polymerizations **show a rapid rise in Rp followed by a rapid decrease to the steady-state** polymerization rate.

Emulsion polymerization **refers to** a unique process employed for some radical chain polymerization.

To a large extent, the molecular weight and polymerization rate can be **varied independently of each other**.

The system **undergoes a very significant change** after only a few percent of the total monomer

has been converted to polymer.

As a consequence the monomer droplets are no longer stable and will coalesce if agitation is stopped.

Each of the curves in Fig.1 is relatively typical of emulsion polymerization behavior.

The mechanism **is not well understood due to the experimental difficulties involved in the study**.

The monomers have been **arranged in Table 1 in their general order of** reactivity.

The classification of a ring-opening polymerization as a chain or step polymerization **can be made on two bases**.

This is **explainable in terms of** the differences in the reaction mechanisms involved.

● 学术论文中避免语言等错误的建议

在稿件寄出前，请按以下程序**分别**检查各项内容：

1. 是否有人称和动词的不统一，第三人称单数的动词是否都加了-s。
2. 是否有时态的错误。
3. 是否有数的错误。
4. 是否有冠词的错误。
5. 是否有单词拼写的错误。
6. 是否有大小写的错误。
7. 是否有标点的错误。
8. 是否有标题格式，编号错误。
9. 是否有文献格式的错误。
10. 是否有页码的错误，有无漏页，颠倒。<包括全文和附图，表。>
11. 是否有寄信的地址、姓名的拼写的错误。