基于Web of science的高水平论文设计与撰写

How to Design and Write a Top-level Paper Based on Web of Science

刘立明

前言

- 为什么要撰写学术论文？
- 一篇高水平的学术论文包括哪些要素？
- 如何利用web of science选择创新点？
- 如何撰写高水平的学术论文？

一、为什么要撰写学术论文？

撰写学术论文的重要性

- 基础研究的成果以论文形式表现
- 研究结果只有发表了，他人才能重复、验证，结果才可能成为知识
- 提供书面材料让同行知道：做了什么？为什么这样做？怎样做的？发现了什么？发现意味了什么？
- 撰写和发表论文是科研工作的最后一道工序
- 发表论文的质量与数量：衡量水平和效率的客观标准
- **发表论文是获得学位的先决条件**
- **更为重要的是，谋生的一种手段**

有一种痛苦叫找工作


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http://www.sina.com.cn 2008年12月15日03:05 人民网-人民日报
本报北京12月14日电 (记者伍修琼)教育部和国家发改委日前联合下发通知要求，2009年硕士研究生招生计划按比上年增长5%左右安排，博士研究生招生计划按比上年增长1.7%安排。
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（1）实验性论文

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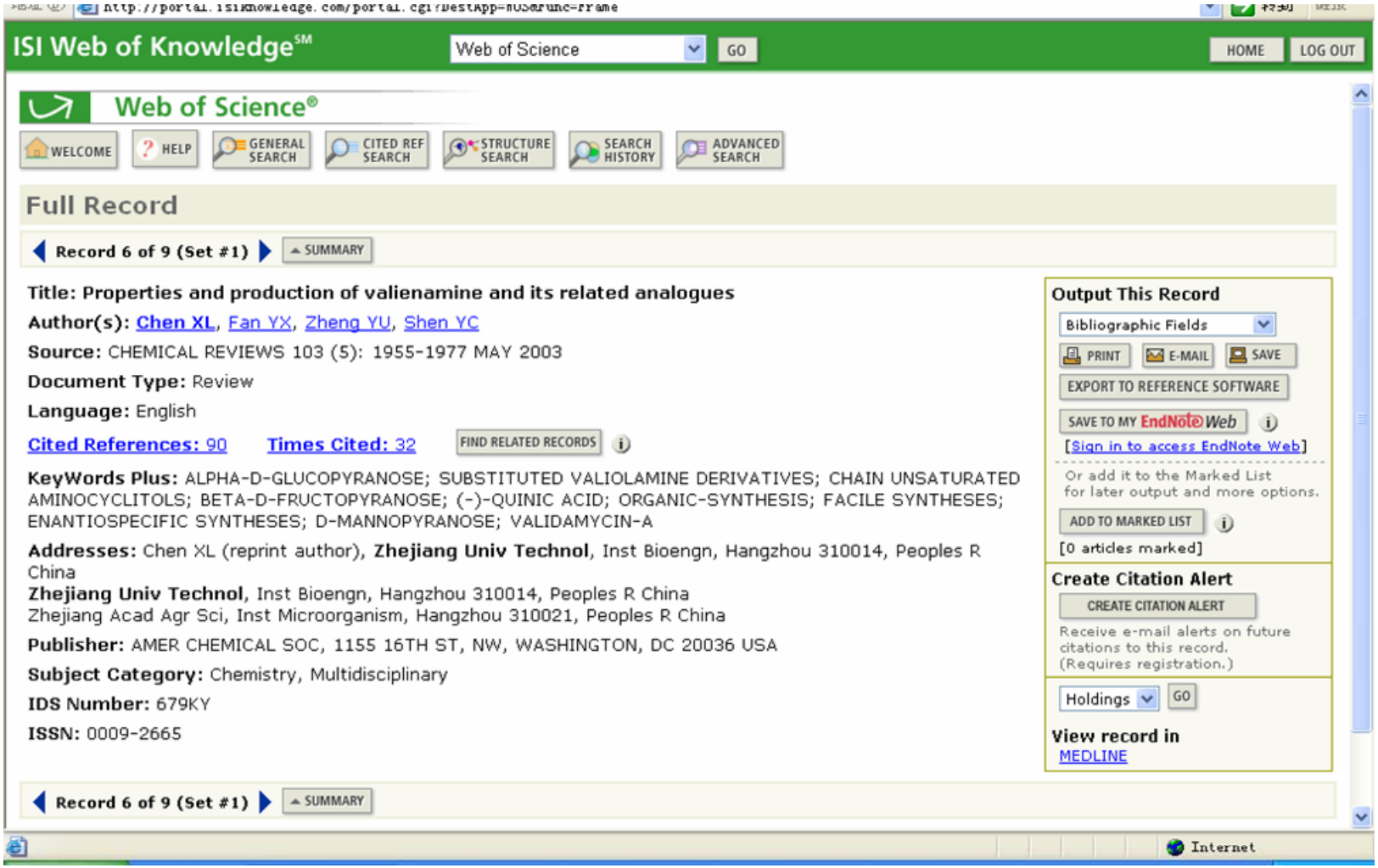
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Source: CHEMICAL REVIEWS 103 (5): 1955-1977 MAY 2003
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Addresses: Chen XL (reprint author), Zhejiang Univ Technol, Inst Bioengn, Hangzhou 310014, Peoples R China
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Biotechnology Advances 27 (2009) 94–101

Contents lists available at ScienceDirect

Biotechnology Advances

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Research review paper

ATP in current biotechnology: Regulation, applications and perspectives

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ARTICLE INFO

Article history:
Received 13 March 2008
Received in revised form 13 August 2008
Accepted 14 October 2008
Available online 5 November 2008

Keywords:
ATP synthase
Metabolic engineering
Cofactor engineering
Biotechnology process optimization
Energy metabolism

ABSTRACT

Adenosine tri-phosphate (ATP), the most important energy source for metabolic reactions and pathways, plays a vital role in the growth of industrial strain and the production of target metabolites. In this review, current advances in manipulating ATP in industrial strains, including altering NADH availability, and regulating NADH oxidation pathway, oxygen supply, proton gradient, the electron transfer chain activity and the F_0F_1-ATPase activity, are summarized and discussed. By applying these strategies, optimal product concentrations, yields and productivity in industrial biotechnology have been achieved. Furthermore, the mechanisms by which ATP extends the substrate utilization spectra and enhances the ability to challenge harsh environmental stress have been elucidated. Finally, three critical issues related to ATP manipulation have been addressed.

二、高水平论文的要素

- 创新性
- 可读性
- 信息量
- 参考文献
- 署名与致谢

高水平论文要求（4C)

- Clear　思路清晰、概念清楚、层次清楚、表达清楚
- Complete　内容完整、结构完整匀称，切忌虎头蛇尾，有始无终
- Correct　科学内容正确（不出错）、资料数据正确（数据可靠、可信）、语言正确（无语法错）
- Concise　论述深刻、充分揭示其科学内涵、使用定量方法

创新性

- Nature：创新是科研成果新颖，引人注意（出人意料或令人吃惊），而且该项研究看来在该领域之外具有广泛的意义，无论是报道一项突出的发现，还是某一重要的问题的实质性进展的第一手报告，均应使其他领域的科学家感兴趣。

- Science：创新是指对自然或理论提出新见解，而不是对已有研究结论的再次论证，内容激动人心并富有启发性，具有广泛的科学兴趣。具体而言，就是说在已沉寂的研究领域提出创新思想；在十分活跃的研究领域取得重大进展或者是将原先彼此分离的研究领域融合在一起。

例证

PNAS

Increasing NADH oxidation reduces overflow metabolism in *Saccharomyces cerevisiae*

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Edited by Lonnie O. Ingram, University of Florida, Gainesville, FL, and approved November 28, 2006 (received for review August 27, 2006)

Respiratory metabolism plays an important role in energy production in the form of ATP in all aerobically growing cells. However, a limitation in respiratory capacity results in overflow metabolism, leading to the formation of byproducts, a phenomenon known as "overflow metabolism" or "the Crabtree effect." The yeast *Saccharomyces cerevisiae* has served as an important model organism for studying the Crabtree effect. When subjected to increasing glycolytic fluxes under aerobic conditions, there is a threshold value of the glucose uptake rate at which the metabolism shifts from purely respiratory to mixed respiratory and fermentative. It is well known that glucose repression of respiratory pathways occurs at high glycolytic fluxes, resulting in a decrease in respiratory capacity. Despite many years of detailed studies on this subject, it is not known whether the onset of the Crabtree effect is due to limited respiratory capacity or is caused by glucose-mediated repression of respiration. When respiration in *S. cerevisiae* was increased by introducing a heterologous alternative oxidase, we observed reduced aerobic ethanol formation. In contrast, increasing nonrespiratory NADH oxidation by overexpression of a water-forming NADH oxidase reduced aerobic glycerol formation. The metabolic response to elevated alternative oxidase occurred predominantly in the mitochondria, whereas NADH oxidase affected genes that catalyze cytosolic reactions. Moreover, NADH oxidase restored the deficiency of cytosolic NADH dehydrogenases in *S. cerevisiae*. These results indicate that NADH oxidase localizes in the cytosol, whereas alternative oxidase is directed to the mitochondria.

alternative oxidase | Crabtree effect | NADH oxidase | redox metabolism

Redox homeostasis is a fundamental requirement for sustained metabolism and growth in all biological systems. The intracellular redox potential is primarily determined by the NADH/NAD ratio and to a lesser extent by the NADPH/NADP ratio. In *Saccharomyces cerevisiae*, >200 reactions involve these cofactors spread over a large spectrum of cellular functions (1). Because NADH is a highly connected metabolite in the metabolic network (1), any change in the NADH/NAD ratio leads to widespread changes in metabolism (2). NADH is generated primarily in the cytosol by glycolysis and in the mitochondria by the tricarboxylic acid (TCA) cycle. Because the NADH/NAD redox couple cannot traverse the mitochondrial membrane in *S. cerevisiae* and other eukaryotic cells (3), distinct mechanisms oxidize NADH to NAD in the cytosol and mitochondria. Cytosolic NADH is oxidized by two external (cytosolic) mitochondrial membrane-bound NADH dehydrogenases encoded by *NDE1* and *NDE2* genes with catalytic sites facing the cytosol (4). Additionally, glycerol-3-phosphate dehydrogenases (encoded by *GPD1* and *GPD2*) oxidize cytosolic NADH with concomitant glycerol formation when the NADH formation rate surpasses its oxidation rate (5). Mitochondrial NADH is oxidized by one internal mitochondrial membrane-bound NADH dehydrogenase encoded by *NDI1* (6).

In many eukaryotic cells, including *S. cerevisiae*, there is complete respiratory metabolism at low glycolytic fluxes, whereas higher glycolytic fluxes result in overflow metabolism leading to the formation of byproducts. In *S. cerevisiae*, overflow metabolism begins when the specific glucose uptake rate (or the glycolytic flux) exceeds a threshold rate, and the result is the formation of ethanol and glycerol (7–10). One hypothesis is that this overflow is due to a limitation in capacity of the respiratory pathways (8, 11). The generation of glycolytic NADH beyond the cellular capacity for its oxidation leads to reduced conditions and ultimately reduced coproducts like ethanol and glycerol. Because the fermentative pathways leading to ethanol generate less ATP than the respiratory pathway, cells respond by increasing the glycolytic flux to meet the ATP demand (12), and this may further induce overflow metabolism. Despite many years of study, it is not known whether the Crabtree effect is triggered by a limitation in respiratory capacity, by the onset of glucose repression of the respiratory metabolism, or simply by an overflow metabolism at the pyruvate branchpoint.

Aerobic ethanol and glycerol generation is a ramification of the different capacities of the fermentative and respiratory pathways (7, 13, 14). Glycerol is generated to reoxidize surplus cytosolic NADH that is formed in glycolysis (15, 16). Because rapid consumption of glucose could lead to the accumulation of NADH, decreasing NADH accumulation by elevating either the rate of respiration or the direct oxidation of NADH is a logical approach to reduce overflow metabolism in *S. cerevisiae*. A previous effort to reduce overflow metabolism in *S. cerevisiae* by manipulating redox balance included deleting *GDH1* (encoding cytosolic NADPH-dependent glutamate dehydrogenase), which slightly reduced glycerol formation (17). The combined overexpression of malic enzyme and pyruvate carboxylase resulted in increased NADPH formation at the expense of NADH and ATP formation, but there was no effect on overflow metabolism (18). These results suggest that NADP(H) has a minor role in controlling overflow metabolism in *S. cerevisiae*. We therefore increased the direct oxidation of NADH by using two approaches: (*i*) overexpressing a water-forming NADH oxidase encoded by the *Streptococcus pneumoniae nox* gene (19) and (*ii*) increasing respiration by overexpressing an alternative oxidase encoded by the *Histoplasma capsulatum AOX1* gene (20). The alternative NADH oxidase decouples the use of NADH for respiratory energy generation by using molecular oxygen to convert NADH to NAD (19). The alternative oxidase mediates the cyanide-resistant, NADH-dependent transport of electrons from the ubiquinone pool to oxygen in many yeasts (21) and is uncoupled with proton translocation (22, 23). By studying the impact of these two

Author contributions: G.N.V., M.A.E., L.O., and J.N. designed research; G.N.V. performed research; G.N.V. and J.E.M. contributed new reagents/analytic tools; G.N.V., M.A.E., L.O., and J.N. analyzed data; G.N.V., M.A.E., L.O., and J.N. wrote the paper; and J.E.M. contributed genetic material.

The authors declare no conflict of interest.

This article is a PNAS direct submission.

Abbreviations: ADH, alcohol dehydrogenase; G3PDH, glycerol-3-phosphate dehydrogenase; IDH, isocitrate dehydrogenase; TCA, tricarboxylic acid.

Data deposition: The data reported in this paper have been deposited in the Gene Expression Omnibus (GEO) database, www.ncbi.nlm.nih.gov/geo (accession no. GSE6267).

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www.pnas.org/cgi/doi/10.1073/pnas.0607469104

创新性

- 如何体现创新：一篇论文或一项研究课题，规模不一定很大，但研究一定要深入，结论一定要深刻，要能反映研究者独到的见解。

例证

APPLIED AND ENVIRONMENTAL MICROBIOLOGY, Aug. 2007, p. 5020–5025 Vol. 73, No. 15
0099-2240/07/$08.00+0 doi:10.1128/AEM.00093-07

Formate as an Auxiliary Substrate for Glucose-Limited Cultivation of *Penicillium chrysogenum*: Impact on Penicillin G Production and Biomass Yield[▽]

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Received 15 January 2007/Accepted 23 May 2007

Production of β-lactams by the filamentous fungus *Penicillium chrysogenum* requires a substantial input of ATP. During glucose-limited growth, this ATP is derived from glucose dissimilation, which reduces the product yield on glucose. The present study has investigated whether penicillin G yields on glucose can be enhanced by cofeeding of an auxiliary substrate that acts as an energy source but not as a carbon substrate. As a model system, a high-producing industrial strain of *P. chrysogenum* was grown in chemostat cultures on mixed substrates containing different molar ratios of formate and glucose. Up to a formate-to-glucose ratio of 4.5 mol · mol^{-1}, an increasing rate of formate oxidation via a cytosolic NAD$^+$-dependent formate dehydrogenase increasingly replaced the dissimilatory flow of glucose. This resulted in increased biomass yields on glucose. Since at these formate-to-glucose ratios the specific penicillin G production rate remained constant, the volumetric productivity increased. Metabolic modeling studies indicated that formate transport in *P. chrysogenum* does not require an input of free energy. At formate-to-glucose ratios above 4.5 mol · mol^{-1}, the residual formate concentrations in the cultures increased, probably due to kinetic constraints in the formate-oxidizing system. The accumulation of formate coincided with a loss of the coupling between formate oxidation and the production of biomass and penicillin G. These results demonstrate that, in principle, mixed-substrate feeding can be used to increase the yield on a carbon source of assimilatory products such as β-lactams.

The filamentous fungus *Penicillium chrysogenum* is applied on a large scale (>60,000 tons year^{-1}) (8, 36) for the industrial production of β-lactam antibiotics, such as penicillin G and penicillin V, and for the production of the cephalosporin precursor adipoyl-7-ADCA. β-Lactam antibiotics are formed in a multistep process in which the first two steps are common for penicillins and cephalosporins. The three amino acids cysteine, valine, and α-aminoadipic acid, derived from central metabolism, are condensed to form the tripeptide ACV (α-aminoadipyl-cysteinyl-valine). The next step is a ring closure that leads to the characteristic penam structure of isopenicillin N, the branch point intermediate at which penicillin biosynthesis diverges from cephalosporin biosynthesis. Penicillin G is formed from isopenicillin N by exchanging its α-aminoadipic acid side chain for phenylacetic acid, using phenylacetyl-coenzyme A as a side chain donor.

Overproduction of secondary metabolites can have a large impact on central metabolism if it requires significant amounts of carbon precursors, reducing equivalents (NADH and NADPH), and free energy equivalents (ATP). Previous studies on penicillin G production in a high-producing industrial strain of *P. chrysogenum* have shown that constraints in central metabolism may reside in the supply and regeneration of the cofactor NADPH rather than in the supply of the carbon precursors, α-aminoadipic acid, cysteine, and valine (40). Moreover, a careful model-based analysis of chemostat data revealed that penicillin G production in this strain appeared to be associated with an unexpectedly high additional energy dissipation (corresponding to 73 mol of ATP per mol penicillin G) (39).

In glucose-limited, penicillin G-producing cultures of *P. chrysogenum*, the following three main carbon flows can be distinguished (Fig. 1): (i) dissimilation of glucose to provide free energy equivalents and reducing power, (ii) assimilation of glucose into cell material, and (iii) production of penicillin G via its carbon precursors (Fig. 1). These three flows are linked via closed balances of the conserved moieties NAD$^+$/NADH, NADP$^+$/NADPH, and ATP/ADP/AMP. As indicated in Fig. 1, this situation implies that biomass formation and penicillin G production compete for glucose, NADPH, and ATP.

Chemo-organoheterotrophic microorganisms such as *P. chrysogenum* use organic substrates such as glucose both as a carbon source and as a source of free energy. Since part of the glucose has to be used for the generation of ATP equivalents in dissimilation, it can be called an energy-deficient substrate (4). Due to this intrinsic free energy deficiency, experimentally obtained biomass yields on glucose are generally lower than the maximum biomass yield that could theoretically be reached when assimilatory reactions are fully optimized (5, 9).

Many previous studies have demonstrated that cofeeding with an auxiliary energy substrate can compensate for the energy deficiency of carbon substrates. Auxiliary substrates are compounds that can be dissimilated to provide free energy requirements but cannot be used as a carbon source for growth. An increase of the carbon source-to-biomass conversion efficiency has been demonstrated for many combinations of carbon sources and auxiliary substrates, including acetate-

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▽ Published ahead of print on 1 June 2007.

生物工程学报
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Chin J Biotech 2008, May 25; 24(5): 821-826
Chinese Journal of Biotechnology ISSN 1000-3061

研究报告

嗜热子囊菌利用短链有机酸生产角质酶

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摘 要: 以嗜热子囊菌(*Thermobifida fusca* WSH03-11)发酵生产角质酶为模型, 研究微生物利用市政污泥厌氧酸化所产短链有机酸为碳源发酵生产高附加值产品的可能。发现: (1)以丁酸、丙酸和乙酸为碳源时, 有机酸和氮元素浓度分别为 8.0 g/L 和 1.5 g/L 有利于角质酶的生产; 而以乳酸为碳源时, 最适有机酸和氮源浓度分别为 3.0 g/L 和 1.0 g/L; (2)改变诱导物角质的浓度, 以丁酸、丙酸、乙酸和乳酸为碳源, 分别比优化前提高了 31.0%、13.3%、43.8%和 73.2%; (3)在四种有机酸中, *T. fusca* WSH03-11 利用乙酸的速率最快, 平均比消耗速率是丙酸的 1.3 倍, 丁酸的 2.0 倍及乳酸的 2.2 倍; 以丁酸为碳源时的酶活(52.4 U/mL)是乳酸的 1.7 倍、乙酸的 2.5 倍和丙酸的 3.2 倍; 角质酶对乳酸的得率(12.70 u/mg)分别是丁酸的 1.4 倍、丙酸的 3.0 倍和乙酸的 3.8 倍; (4)以混合酸为碳源生产角质酶, *T. fusca* WSH03-11 优先利用乙酸, 而对丁酸的利用受到抑制。进一步研究发现, 混合酸中 0.5 g/L 的乙酸将导致丁酸的消耗量降低 66.7%。这是首次利用混合酸作碳源发酵生产角质酶的研究报道。这一研究结果进一步确证了利用市政污泥厌氧酸化所产有机酸为碳源发酵生产高附加值产品的可行性, 为以廉价碳源生产角质酶奠定了良好的基础。

关键词: 嗜热子囊菌, 短链有机酸, 角质酶

Cutinase Production from Short-chain Organic Acids by *Thermobifida fusca*

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Abstract: We studied cutinase production from short-chain organic acids by *Thermobifida fusca* WSH03-11 to evaluate the possibility of converting municipal sludge to high value-added products. The optimum organic acid (8.0 g/L) and nitrogen source (1.5 g/L) concentrations were determined by the single factor experiments with butyric acid, propionic acid and acetic acid as the carbon sources. When lactic acid was used as the carbon source, the optimum organic acid (3.0 g/L) and nitrogen source (1.0 g/L) concentrations were obtained. Cutinase production by *T. fusca* WSH03-11 was further improved with butyric acid (by 31.0%), propionic acid (by 13.3%), acetic acid (by 43.8%) and lactic acid (by 73.2%) as carbon source, respectively, with the optimized cutin concentrations. Among these four short-chain organic acids, the average specific consumption rate of acetic acid was the highest,

Received: September 20, 2007; **Accepted:** December 10, 2007
Supported by: the "973" Program(No. 2007CB714306), the New-century Excellent Talent Supporting Program, Major Technology Research Program of Ministry of Education (No. V200611) and "863" Program(No. 2006AA06Z315).
Corresponding author: Guocheng Du. Tel: +86-510-85918309; Fax: +86-510-85918309; E-mail: gcdu@jiangnan.edu.cn
973 项目(No. 2007CB714306), 新世纪优秀人才支持计划, 教育部科学研究重大项目(No. V200611), 863 项目(No. 2006AA06Z315)资助。

可读性

- Nature：来稿应清楚、简练，以便让其他领域的读者和母语为非英语的读者能够读懂。
- 在投稿之前，请从事其他学科研究的同事对最终文稿在清楚易懂方面提供意见往往很有用。
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- 保证文章和图片对非该领域的读者明确、能读懂。
- Nature一再申明：凡不符合他们要求的稿件，毋需深入阅读即行退稿。

什么是可读性

- 简明、清楚、易懂!

- 可读性：使读者能够明了你要说的什么问题，是怎样着手解决的，并不需要读者非得全面理解你的论文的全部内容。

可读性包括：

- 结论的可靠性：实质性进展？阶段性成果的指导意义？
- 构思的严密性和写作的逻辑性：解释学术思想，介绍研究背景
- 论述的生动性：
- 文字和图表的规范性：数据的取舍和图表的设计
- 论文格式的标准性：严格按照Guide for authors

信息量

- Chinese Physics Letters: “要尽可能多地给出有关研究的信息，尽可能少地运用investigate（调查），Study（研究），discuss（讨论）等词。
- 如：“The acid concentration is 25 g/L 就比“The acid concentration is measured”包含更多的信息量。
- 避免或少使用“it is shown, it is obvious”等冗余词语

信息量

- 读之前或者不知道，或者模糊不清或者不确切的知识，在读过该文之后不仅获得新知识，还消除了模糊不清或不确切之处，就说明这篇文章包含较多的信息量。

- 如：“多点测量”的信息量要比“6点测量”少得多，前者给出的是模糊的、不确切的信息，而后则是清楚的、确切的信息

三、如何利用web of science选择创新点？

设计高水平论文的程序

问题？创意？

信息检索、分析。。。

实验、计算。。。

论文写作

同行评价、引用、应用。。。

新的问题？发展、延伸。。。

Web of science简介

Science Citation Index Expanded科学引文索引，简称SCI 7,321种
1900-

Social Sciences Citation Index社会科学引文索引，简称SSCI 2,159种
1956-

Arts & Humanities Citation Index艺术与人文科学引文索引，简称A&HCI 1,225种 1975-

两个化学信息事实型数据库

Current Chemical Reactions,简称CCR 75万条化学反应 1840-

Index Chemicus,简称IC 150万个化合物 1993-

Web of science功能

强大的分析功能 – 能够处理10万条记录

8个字段的深入分析：

- 著者
- 出版年
- 研究机构
- 来源期刊
- 学科领域
- 国家与地区
- 文献类型
- 文献语种

多层次的限定与精确的检索：

- 发现某研究领域的隐含的发展趋势
- 把握学科领域的最新动态
- 了解某特定课题在不同学科的分布情况
- 获取某学科领域的核心研究人员的信息

中外文数据库:	[中国国家标准文本数据库 粮油数据库]	[中图链接服务(CNPIEC LINK Service在线数据检索系统)]
	[全国中外文期刊联合目录]	[生物专题数据库群]
	[中国科学文献服务系统(中国科学引文数据库)]	[书目数据库]
	[中文社会科学引文索引(CSSCI)]	[物理类文摘资源]
	[江苏省高等院校图书馆书刊联合目录]	[光学类文摘资源]
	[全国报刊索引数据库]	[土木工程/机械工程类文摘资源]
	[无公害食品标准数据库]	[电子信息及计算机类文摘资源]
	[国道外文食品专题库]	[数学类文摘资源]
		[综合文摘资源]
		[Literature Online英美文学网] new
		[CSA Linguistics and Language Behavior Abstracts 语言学与语言行为文摘数据库] new
		[ISI Web of Science-SCIE引文索引数据库] new
		[ISI Web of Science-SSCI社会科学引文索引数据库] new
		[RSC 英国皇家化学学会电子期刊及数据库] new
多媒体资源:	[网上报告厅]	
	[金图国际高校英语学习资源总库]	
	[KUKE数字音乐图书馆]	

ISI Web of Knowledge℠ 领先一步

TRIAL

More information for new users

所有数据库

检索:

检索范围 主题

示例: oil spill* mediterranean

AND 检索范围 作者

示例: O'Brian C* OR OBrian C*

AND 检索范围 出版物名称

示例: Cancer* OR Journal of Cancer Research and Clinical Oncology

添加另一字段 >>

检索 清除

限于: 所有年份

了解 ISI Web of Knowledge

借助这种全方位工作流程解决方案，快速检索、分析和管理自然科学、社会科学、艺术和人文科学方面的信息。

- 想了解更多?
- 多语种培训

使用 ***Web of Science*** 选项卡可进行以下操作:

- 被引参考文献检索
- 新! 会议录文献
- 作者甄别
- 地址检索
- 按“被引频次”对结果进行排序
- 引文报告(h-index)

定制您的体验

登录 | 注册

- 使用完全集成的免费 *EndNote Web* 在线保存和管理参考文献。
- 保存和运行检索

Web of science对我们的帮助

- 进行论文的开题查新工作、选取论文的研究课题
- 跟踪某研究领域/某课题的最新进展
- 高效率地完成学位论文的写作
- 帮助获得作者投稿指南、选择投稿期刊、寻找同行评审，有助于其论文的发表
- 寻求未来的学习和工作机会

Web of science对我们的帮助

- 分析功能可以帮助您清晰准确的了解检索到的记录的相关信息。在本例中您可以通过分析功能了解：

- --发表有关糖酵解研究论文最多的作者是谁
- --发表有关糖酵解研究论文最多的国家
- --发表有关糖酵解研究论文最多的机构是哪里
- --糖酵解研究论文在哪一年发表的最多
- --糖酵解研究论文主要发表在那些杂志上
- --糖酵解研究论文主要涉及了哪些研究领域

登录 | 我的 ResearcherID | 我的引文跟踪 | 我的期刊列表 | 我已保存的检索 | 注销 |

ISI Web of Knowledge℠ 领先一步

所有数据库 | 选择一个数据库 | Web of Science | 其他资源

检索 | 被引参考文献检索 | 化学结构检索 | 高级检索 | 检索历史 | 标记结果列表 (0)

TRIAL

More infor for new us

Web of Science® – 现在可以同时检索会议录文献

检索:

glycolytic or glycolysis 检索范围 主题

示例: oil spill* mediterranean

AND 检索范围 作者

示例: O'Brian C* OR OBrian C*

您是否需要根据作者来查找论文? 请使用作者甄别工具。

AND 检索范围 出版物名称

示例: Cancer* OR Journal of Cancer Research and Clinical Oncology

添加另一字段 >>

检索 清除

查找 ISI Proceedings?

目前在 *Web of Science* 中，会议文献可通过 *Conference Proceedings Citation Index* 进行检索。更多信息。

了解 Web of Science

在世界领先的引文数据库中，浏览自然科学、社会科学、艺术及人文学等多学科领域具有高影响力的 10,000 多种期刊，以及包含有超过 120,000 个会议的国际会议录。Web of Science 提供了被引参考文献检索、引证关系图和分析等强大的工具。

检索结果

Topic=(glycolytic or glycolysis)
入库时间=所有年份. 数据库=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, IC, CCR-EXPANDED.

检索结果: **16,833**

精炼检索结果

结果内检索

检索

学科类别 精炼

- BIOCHEMISTRY & MOLECULAR BIOLOGY (4,445)
- CELL BIOLOGY (1,655)
- PHYSIOLOGY (1,614)
- BIOPHYSICS (1,060)
- NEUROSCIENCES (1,008)

更多选项/分类...

文献类型 精炼

- ARTICLE (13,487)
- MEETING ABSTRACT (1,074)
- PROCEEDINGS PAPER (1,002)
- REVIEW (891)
- NOTE (202)

更多选项/分类...

作者

来源出版物

出版年

打印 电子邮件 添加到标记结果列表 更多选项

分析检索结果

引文报告功能不可用。 [?]

1. Title: Effects of monocrotaline on energy metabolism in the rat liver
Author(s): Mingatto FE, Maioli MA, Bracht A, et al.
Source: **TOXICOLOGY LETTERS** Volume: **182** Issue: **1-3** Pages: **115-120** Published: **NOV 10 2008**
Times Cited: **0**
全文

2. Title: Compartmentation prevents a lethal turbo-explosion of glycolysis in trypanosomes
Author(s): Haanstra JR, van Tuijl A, Kessler P, et al.
Source: **PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA** Volume: **105** Issue: **46** Pages: **17718-17723** Published: **NOV 18 2008**
Times Cited: **0**

3. Title: A catabolic block does not sufficiently explain how 2-deoxy-D-glucose inhibits cell growth
Author(s): Ralser M, Wamelink MM, Struys EA, et al.
Source: **PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA** Volume: **105** Issue: **46** Pages: **17807-17811** Published: **NOV 18 2008**
Times Cited: **0**
全文

4. Title: STRUCTURE, THERMAL STABILITY AND MECHANICAL PROPERTIES OF POLYURETHANES, BASED ON GLYCOLYSATE FROM POLYURETHANE FOAM WASTE, PREPARED WITH USE OF 1,6-HEXANEDIOL AS A GLYCOL
Author(s): Datta J, Rohn M
Source: **POLIMERY** Volume: **53** Issue: **11-12** Pages: **871-875** Published: **2008**
Times Cited: **0**

5. Title: Loss of cytosolic fructose-1,6-bisphosphatase limits photosynthetic sucrose synthesis and causes severe

涉及的学科


隐藏精炼
精炼检索结果
结果内检索
检索
学科类别
文献类型
精炼
ARTICLE (13,487)
MEETING ABSTRACT (1,074)
PROCEEDINGS PAPER (1,002)
REVIEW (891)
NOTE (202)
更多选项/分类...
作者
来源出版物
出版年
会议标题
机构
学科类别
精炼
排除
取消
排序方式:
记录数
显示前 100 个 学科类别 (按记录数)。 要获得更多精炼选项，请使用 分析检索结果。
BIOCHEMISTRY & MOLECULAR BIOLOGY (4,445)
CELL BIOLOGY (1,655)
PHYSIOLOGY (1,614)
BIOPHYSICS (1,060)
NEUROSCIENCES (1,008)
ENDOCRINOLOGY & METABOLISM (994)
MICROBIOLOGY (936)
BIOTECHNOLOGY & APPLIED MICROBIOLOGY (910)
CARDIAC & CARDIOVASCULAR SYSTEMS (677)
BIOLOGY (676)
PLANT SCIENCES (622)
PHARMACOLOGY & PHARMACY (621)
ONCOLOGY (620)
MEDICINE, RESEARCH & EXPERIMENTAL (550)
POLYMER SCIENCE (147)
DENTISTRY, ORAL SURGERY & MEDICINE (134)
MARINE & FRESHWATER BIOLOGY (128)
MYCOLOGY (125)
FISHERIES (121)
MATHEMATICAL & COMPUTATIONAL BIOLOGY (121)
RESPIRATORY SYSTEM (120)
PATHOLOGY (118)
CHEMISTRY, MULTIDISCIPLINARY (107)
CHEMISTRY, ANALYTICAL (106)
OPHTHALMOLOGY (106)
GASTROENTEROLOGY & HEPATOLOGY (103)
UROLOGY & NEPHROLOGY (97)
PEDIATRICS (96)
COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS (40)
ANESTHESIOLOGY (36)
ENTOMOLOGY (34)
EDUCATION, SCIENTIFIC DISCIPLINES (33)
PSYCHIATRY (31)
RHEUMATOLOGY (30)
CRYSTALLOGRAPHY (29)
DERMATOLOGY (28)
HORTICULTURE (28)
TRANSPLANTATION (28)
ANDROLOGY (27)
BEHAVIORAL SCIENCES (27)
TROPICAL MEDICINE (25)
PHYSICS, ATOMIC, MOLECULAR & CHEMICAL (22)

检索结果: **1,537**

排序方式: 更新日期

精炼检索结果

结果内检索

检索

学科类别 精炼

- MICROBIOLOGY (936)
- BIOTECHNOLOGY & APPLIED MICROBIOLOGY (910)
- BIOCHEMISTRY & MOLECULAR BIOLOGY (231)
- MYCOLOGY (103)
- FOOD SCIENCE & TECHNOLOGY (88)

更多选项/分类...

文献类型 精炼

- ARTICLE (1,339)
- REVIEW (87)
- PROCEEDINGS PAPER (64)
- NOTE (22)
- MEETING ABSTRACT (16)

更多选项/分类...

作者

来源出版物

出版年

会议标题

打印 电子邮件 添加到标记结果列表 更多选项

分析检索结果
创建引文报告

1. Title: Enhanced Production of 1,2-Propanediol by tpil Deletion in Saccharomyces cerevisiae
Author(s): Jung JY, Choi ES, Oh MK
Source: **JOURNAL OF MICROBIOLOGY AND BIOTECHNOLOGY** Volume: **18** Issue: **11** Pages: **1797-1802** Published: **NOV 2008**
Times Cited: **0**

2. Title: The Global Repressor SugR Controls Expression of Genes of Glycolysis and of the L-Lactate Dehydrogenase LdhA in Corynebacterium glutamicum
Author(s): Engels V, Lindner SN, Wendisch VF
Source: **JOURNAL OF BACTERIOLOGY** Volume: **190** Issue: **24** Pages: **8033-8044** Published: **DEC 2008**
Times Cited: **0**
全文

3. Title: Can sugars be produced from fatty acids? A test case for pathway analysis tools
Author(s): de Figueiredo LF, Schuster S, Kaleta C, et al.
Source: **BIOINFORMATICS** Volume: **24** Issue: **22** Pages: **2615-2621** Published: **NOV 15 2008**
Times Cited: **0**
全文

4. Title: A joint transcriptomic, proteomic and metabolic analysis of maize endosperm development and starch filling
Author(s): Prioul JL, Mechin V, Lessard P, et al.
Source: **PLANT BIOTECHNOLOGY JOURNAL** Volume: **6** Issue: **9** Pages: **855-869** Published: **DEC 2008**
Times Cited: **0**
全文

5. Title: Oxygen-Dependent Transcriptional Regulator Hap1p Limits Glucose Uptake by Repressing the Expression of the Major Glucose Transporter Gene RAG1 in Kluyveromyces lactis
Author(s): Bao WG, Guiard B, Fang ZA, et al.
Source: **EUKARYOTIC CELL** Volume: **7** Issue: **11** Pages: **1895-1905** Published: **NOV 2008**

ISI Web of Knowledge℠ 领先一步

<<< 返回结果列表

分析检索结果

1,537 records. Topic=(glycolytic or glycolysis)
分析： Subject Areas=(MICROBIOLOGY OR BIOTECHNOLOGY & APPLIED MICROBIOLOGY)

根据此字段排列记录:	分析：	设置显示 选项:	排序方式:
语种 出版年 来源出版物 学科类别	最多 500 条记录。	显示前 10 条结果。 最少记录数 (阈值): 2	○ 记录数 ○ 已选字段

分析

请使用以下复选框查看相应记录。您可以查看已选择的记录，也可以排除这些记录(查看其他记录)。
注:如果原始检索式包含的记录数比要分析的记录数多，
则显示的记录数有可能比列出的记录数多。

查看记录 / 排除记录	字段:作者	记录数	%，共 500	柱状图	将分析数据保存至文件
☐	HEIJNEN, JJ	13	2.6000 %		
☐	VAN GULIK, WM	12	2.4000 %		
☐	VAN WINDEN, WA	9	1.8000 %		
☐	WITTMANN, C	9	1.8000 %		
☐	CHEN, J	8	1.6000 %		
☐	PRONK, JT	7	1.4000 %		
☐	SHIMIZU, K	7	1.4000 %		
☐	JENSEN, PR	6	1.2000 %		
☐	LARSSON, C	6	1.2000 %		
☐	LI, Y	6	1.2000 %		
查看记录 / 排除记录	字段:作者	记录数	%，共 500	柱状图	将分析数据保存至文件

(超出显示选项设置值以外还有 2010 个 作者 值。)

则显示的记录数有可能比列出的记录数多。

查看记录 / 排除记录	字段:机构名称	记录数	%，共 500	柱状图	将分析数据保存至文件
☐	DELFT UNIV TECHNOL	17	3.4000 %		
☐	INRA	14	2.8000 %		
☐	CSIC	10	2.0000 %		
☐	KYOTO UNIV	10	2.0000 %		
☐	TECH UNIV DENMARK	10	2.0000 %		
☐	UNIV ROCHESTER	9	1.8000 %		
☐	KEIO UNIV	8	1.6000 %		
☐	UNIV SAARLAND	8	1.6000 %		
☐	CNRS	7	1.4000 %		
☐	KOREA UNIV	7	1.4000 %		
☐	KYUSHU INST TECHNOL	7	1.4000 %		
☐	RUSSIAN ACAD SCI	7	1.4000 %		
☐	SO YANGTZE UNIV	7	1.4000 %		
☐	UNIV FLORIDA	7	1.4000 %		
☐	CHINESE ACAD SCI	6	1.2000 %		
☐	RICE UNIV	6	1.2000 %		
☐	SEOUL NATL UNIV	6	1.2000 %		
☐	UNIV STUTTGART	6	1.2000 %		
☐	UNIV WAGENINGEN & RES CTR	6	1.2000 %		
☐	ETH	5	1.0000 %		
☐	NIZO FOOD RES	5	1.0000 %		

出版年
来源出版物
学科类别

最少记录数 (阈值): 2

已选字段

分析

请使用以下复选框查看相应记录。您可以查看已选择的记录，也可以排除这些记录(查看其他记录)。
注:如果原始检索式包含的记录数比要分析的记录数多，
则显示的记录数有可能比列出的记录数多。

查看记录 / 排除记录	字段:来源出版物	记录数	%，共 500	柱状图	将分析数据保存至文件
	APPLIED AND ENVIRONMENTAL MICROBIOLOGY	33	6.6000 %		
	JOURNAL OF BACTERIOLOGY	33	6.6000 %		
	FEMS YEAST RESEARCH	22	4.4000 %		
	JOURNAL OF BIOTECHNOLOGY	22	4.4000 %		
	METABOLIC ENGINEERING	20	4.0000 %		
	MICROBIOLOGY-SGM	20	4.0000 %		
	BIOTECHNOLOGY AND BIOENGINEERING	19	3.8000 %		
	APPLIED MICROBIOLOGY AND BIOTECHNOLOGY	16	3.2000 %		
	BMC GENOMICS	15	3.0000 %		
	MOLECULAR MICROBIOLOGY	15	3.0000 %		
查看记录 / 排除记录	字段:来源出版物	记录数	%，共 500	柱状图	将分析数据保存至文件

(超出显示选项设置值以外还有 111 个 来源出版物 值。)

<< 返回前一结果

检索结果

Topic=(glycolytic or glycolysis)
入库时间=所有年份. 数据库=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, IC, CCR-EXPANDED.
精炼依据: Subject Areas=(MICROBIOLOGY OR BIOTECHNOLOGY & APPLIED MICROBIOLOGY) AND Source Titles=(APPLIED AND ENVIRONMENTAL MICROBIOLOGY)

检索结果: **120**

页 1 /12 转至

排序方式: 更新日期

精炼检索结果

结果内检索

检索

学科类别 精炼

- BIOTECHNOLOGY & APPLIED MICROBIOLOGY (120)
- MICROBIOLOGY (120)

更多选项/分类...

文献类型 精炼

- ARTICLE (117)
- NOTE (2)
- REVIEW (1)

更多选项/分类...

作者

来源出版物

出版年

会议标题

机构

打印 电子邮件 添加到标记结果列表 更多选项

分析检索结果
创建引文报告

1. Title: High Glycolytic Flux Improves Pyruvate Production by a Metabolically Engineered Escherichia coli Strain
Author(s): Zhu YH, Eiteman MA, Altman R, et al.
Source: **APPLIED AND ENVIRONMENTAL MICROBIOLOGY** Volume: **74** Issue: **21** Pages: **6649-6655** Published: **NOV 2008**
Times Cited: **0**
全文

2. Title: Hydrogenomics of the Extremely Thermophilic Bacterium Caldicellulosiruptor saccharolyticus
Author(s): van de Werken HJG, Verhaart MRA, VanFossen AL, et al.
Source: **APPLIED AND ENVIRONMENTAL MICROBIOLOGY** Volume: **74** Issue: **21** Pages: **6720-6729** Published: **NOV 2008**
Times Cited: **0**
全文

3. Title: Optimization of metabolic capacity and flux through environmental cues to maximize hydrogen production by the cyanobacterium "Arthrospira (Spirulina) maxima"
Author(s): Ananyev G, Carrieri D, Dismukes GC
Source: **APPLIED AND ENVIRONMENTAL MICROBIOLOGY** Volume: **74** Issue: **19** Pages: **6102-6113** Published: **OCT 2008**
Times Cited: **0**
全文

4. Title: Dynamics of glycolytic regulation during adaptation of Saccharomyces cerevisiae to fermentative metabolism

High Glycolytic Flux Improves Pyruvate Production by a Metabolically Engineered Escherichia coli Strain

Author(s): Zhu YH (Zhu, Yihui)[1], Eiteman MA (Eiteman, Mark A.)[1], Altman R (Altman, Ronni)[1], Altman E (Altman, Elliot)[1]

Source: APPLIED AND ENVIRONMENTAL MICROBIOLOGY **Volume:** 74 **Issue:** 21 **Pages:** 6649-6655 **Published:** NOV 2008

Times Cited: 0 **References:** 50 Citation Map *beta*

Abstract: We report pyruvate formation in Escherichia coli strain ALS929 containing mutations in the aceEF, pfl, poxB, pps, and ldhA genes which encode, respectively, the pyruvate dehydrogenase complex, pyruvate formate lyase, pyruvate oxidase, phosphoenolpyruvate synthase, and lactate dehydrogenase. The glycolytic rate and pyruvate productivity were compared using glucose-, acetate-, nitrogen-, or phosphorus- limited chemostats at a growth rate of 0.15 h(-1). Of these four nutrient limitation conditions, growth under acetate limitation resulted in the highest glycolytic flux (1.60 g/g . h), pyruvate formation rate (1.11 g/g . h), and pyruvate yield (0.70 g/g). Additional mutations in atpFH and arcA (strain ALS1059) further elevated the steady- state glycolytic flux to 2.38 g/g . h in an acetate- limited chemostat, with heterologous NADH oxidase expression causing only modest additional improvement. A fed- batch process with strain ALS1059 using defined medium with 5 mM betaine as osmoprotectant and an exponential feeding rate of 0.15 h(-1) achieved 90 g/liter pyruvate, with an overall productivity of 2.1 g/liter . h and yield of 0.68 g/g.

Document Type: Article

Language: English

KeyWords Plus: MALIC ENZYME; VOLUMETRIC PRODUCTIVITY; LACTATE-DEHYDROGENASE; BODY-COMPOSITION; GLOBAL ANALYSIS; ACID PRODUCTION; FED-BATCH; FERMENTATION; SYSTEM; DIET

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1.	Title: Alterations of cellular physiology in Escherichia coli in response to oxidative phosphorylation impaired by defective F-1-ATPase Author(s): Noda S, Takezawa Y, Mizutani T, et al. Source: **JOURNAL OF BACTERIOLOGY** Volume: **188** Issue: **19** Pages: **6869-6876** Published: **OCT 2006** Times Cited: **4** 全文	40	8
2.	Title: Development of ethanologenic bacteria Author(s): Jarboe LR, Grabar TB, Yomano LP, et al. Source: **BIOFUELS** Book Series: **ADVANCES IN BIOCHEMICAL ENGINEERING / BIOTECHNOLOGY** Volume: **108** Pages: **237-261** Published: **2007** Times Cited: **6**	159	7
3.	Title: Overflow metabolism in Escherichia coli during steady-state growth: Transcriptional regulation and effect of the redox ratio Author(s): Vemuri GN, Altman E, Sangurdekar DP, et al.	39	7

四、如何撰写高水平的学术论文？

科技论文的基本结构

Introduction, Methods, Results, and Discussion (IMRAD)

- I: What and why? 研究什么问题？为什么研究这个问题？
- M: How? 如何研究的？
- R: What? 发现了什么？
- D: What? 发现意味着什么？

1 如何撰写结果？

研究结果的写作要点

(1) 在结果的开始部分简单介绍原理和实验目的;

(2)对实验或观察结果的表达要高度概括和提炼 (按逻辑顺序描述或总结重要的观察结果);

(3)数据表达可采用文字与图表相结合的形式 (凡用文字能说明的问题，就尽量不用图表再复述；不要同时用表和图重复同一数据);

(4)尽可能列出“结果”的原始数据，而不能只报道统计处理后的数据 (为帮助读者的理解，可适当评论原始数据,对结果的说明、解释、与理论模型或他人结果的比较等)

(5)要学会合理使用图、表和文字说明;

(6)要敢于舍弃不必要的数据!

如何撰写结果：时态

(1)一般现在时：对研究结果的说明或由其得出的一般性推论、不同结果之间或实验数据与理论模型之间进行比较

——The higher incidence of back pain in civilian pilots **may** be due to ….

——These results **agree** well with the findings of Smith….

(2)过去式：所叙述或总结研究结果的内容为关于过去的事实

——After flights of less than two hours, 11% of the army pilots and 33% of the civilian pilots **reported** back pain.

如何撰写结果：图的使用

- **不要把图表的序号作为段落的主题句，应在句中指出图表所揭示的结论 (把图表的序号放入括号中):**

  避免: Figure 1 shows the relationship between A and B.

  建议: A was significantly higher than B at all time points checked (Fig. 1).

  避免: It is clearly shown in Table 1 that low pH inhibited the growth of *S. cerevisiae*.

  建议: Low pH inhibited the growth of *S. cerevisiae*(Table 1).

表达“比较”时，避免使用“compared with”，应该直接明确指出比较的结果

如何撰写结果：图的使用

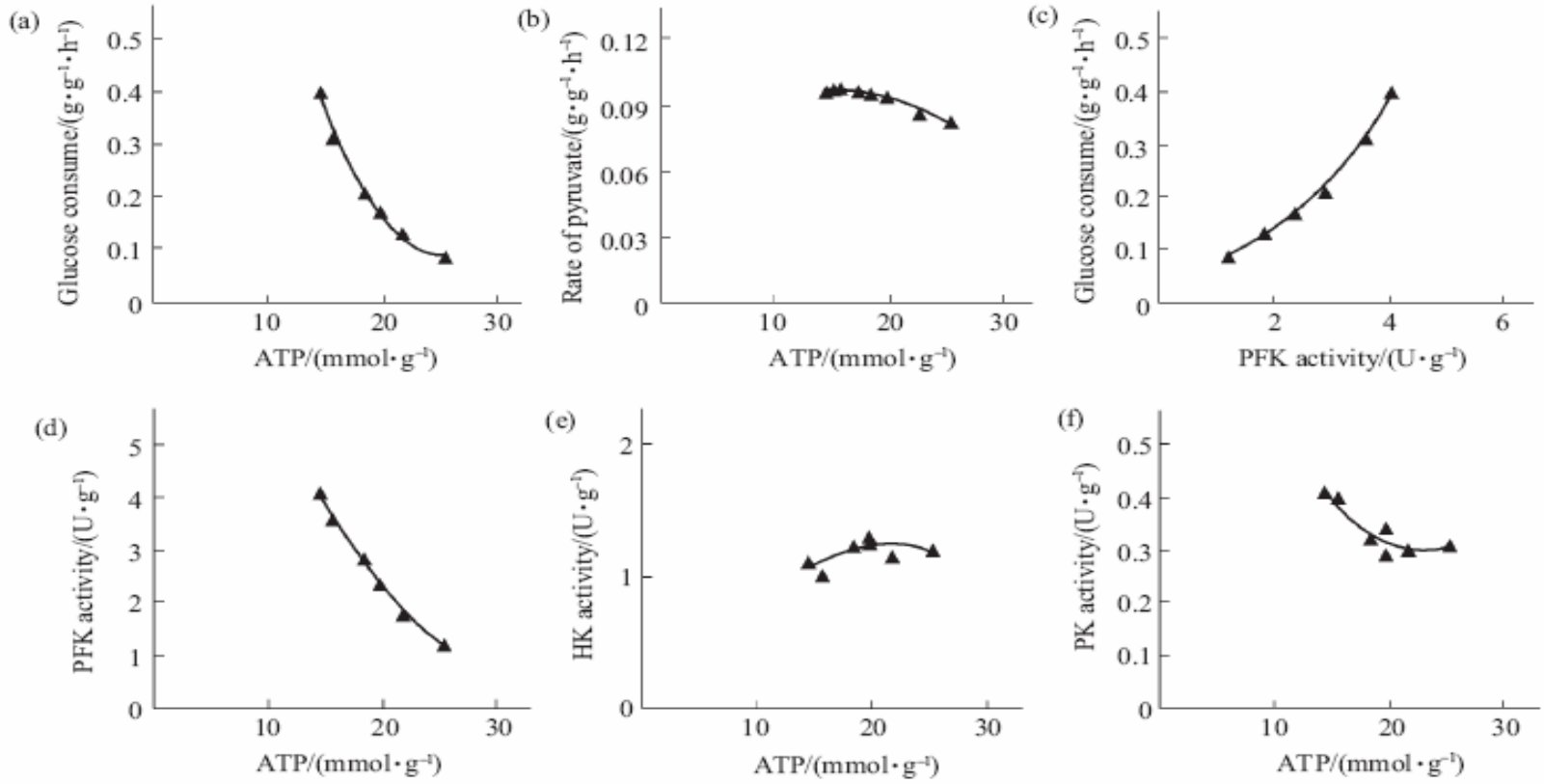


Fig.5 Effect of intracellular ATP concentration on the glycolytic pathway

(a) $y=0.0026x^2-0.1288x+1.7149$; $r^2=0.9967$. (b) $y=-0.0001x^2+0.0037x+0.0709$; $r^2=0.965$. (c) $y=0.0241x^2-0.0202x+0.0824$; $r^2=0.9958$. (d) $y=0.0102x^2-0.6709x+11.58$; $r^2=0.9971$. (e) $y=-0.0038x^2+0.1634x-0.5185$; $r^2=0.5099$. (f) $y=0.0018x^2-0.0796x+1.1986$; $r^2=0.8706$.

如何撰写结果：图的使用

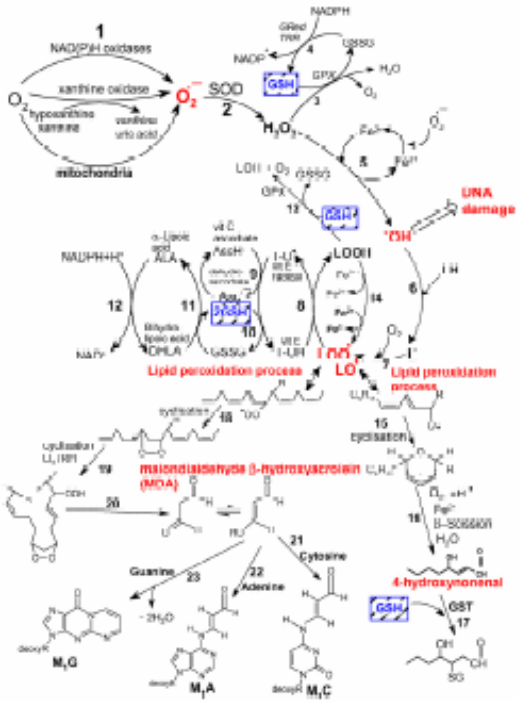
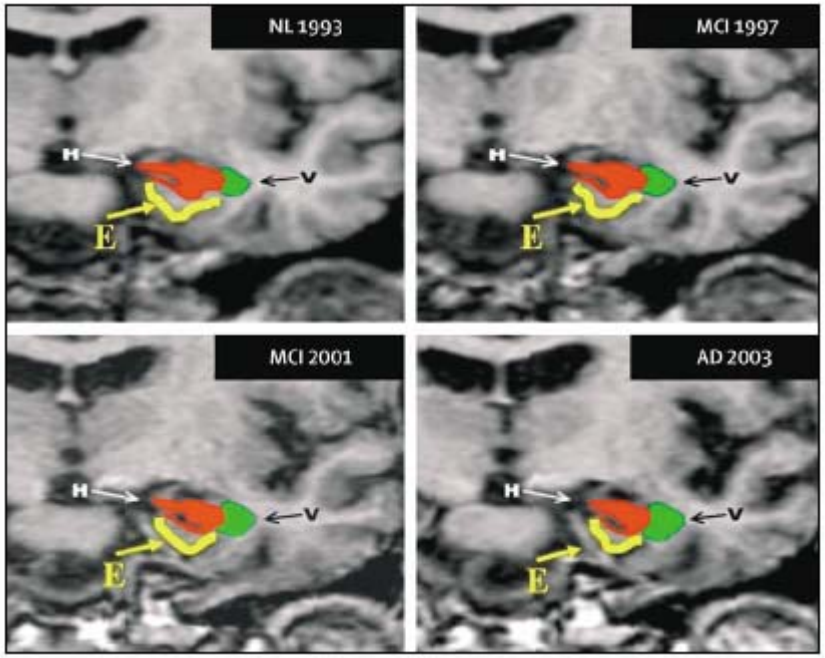
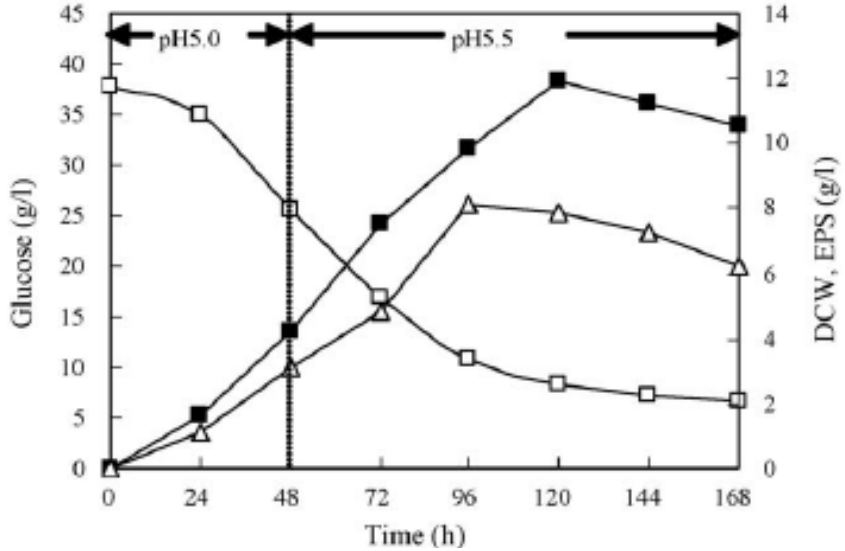


Fig. 1. Pathways of ROS formation, the lipid peroxidation process and the role of glutathione (GSH) and other antioxidants (Vitamin E, Vitamin C, lipoic acid) in the management of oxidative stress (equations are not balanced). Reaction 1: The superoxide anion radical is formed by the process of reduction of molecular oxygen mediated by NAD(P)H oxidases and xanthine oxidase or non-enzymatically by redox-reactive compounds such as the semi-ubiquinone compound of the mitochondrial electron transport chain. Reaction 2: Superoxide radical is disminated by the superoxide dismutases (SOD) to hydrogen peroxide. Reaction 3: Hydrogen peroxide is most efficient by scavenged by the enzyme glutathione peroxidase (GPx) which requires GSH as the electron donor. Reaction 4: The oxidised glutathione (GSSG) is reduced back to GSH by the enzyme glutathione reductase (Gred) which uses NADPH as the electron donor. Reaction 5: Some transition metals (e.g. Fe^{2+}, Cu^{+} and others) can breakdown hydrogen peroxide to the reactive hydroxyl radical (Fenton reaction). Reaction 6: The hydroxyl radical can abstract an electron from polyunsaturated fatty acid (LH) to give rise to a carbon-centred lipid radical ($L^{\bullet}$). Reaction 7: The lipid radical ($L^{\bullet}$) can further interact with molecular oxygen to give a lipid peroxyl radical ($LOO^{\bullet}$). If the resulting lipid peroxyl radical $LOO^{\bullet}$ is not reduced by antioxidants, the lipid peroxidation process occurs (reactions 18–23 and 15–17). Reaction 8: The lipid peroxyl radical ($LOO^{\bullet}$) is reduced within the membrane by the reduced form of Vitamin E (T-OH) resulting in the formation of a lipid hydroperoxide and a radical of Vitamin E ($T\text{-}O^{\bullet}$). Reaction 9: The regeneration of Vitamin E by Vitamin C: the Vitamin E radical ($T\text{-}O^{\bullet}$) is reduced back to Vitamin E (T-OH) by ascorbic acid (the physiological form of ascorbate is ascorbate monoanion, $AscH^{-}$) leaving behind the ascorbyl radical ($Asc^{\bullet-}$). Reaction 10: The regeneration of Vitamin E by GSH: the oxidised Vitamin E radical ($T\text{-}O^{\bullet}$) is reduced by GSH. Reaction 11: The oxidised glutathione (GSSG) and the ascorbyl radical ($Asc^{\bullet-}$) are reduced back to GSH and ascorbate monoanion, $AscH^{-}$, respectively, by the dihydrolipoic acid (DHLA) which is itself converted to α-lipoic acid (ALA). Reaction 12: The regeneration of DHLA from ALA using NADPH. Reaction 13: Lipid hydroperoxides are reduced to alcohols and dioxygen by GPx using GSH as the electron donor. *Lipid peroxidation process*: Reaction 14: Lipid hydroperoxides can react fast with Fe^{2+} to form lipid alkoxyl radicals ($LO^{\bullet}$), or much slower with Fe^{3+} to form lipid peroxyl radicals ($LOO^{\bullet}$). Reaction 15: Lipid alkoxyl radical ($LO^{\bullet}$) derived for example from arachidonic acid undergoes cyclization reaction to form a six-membered ring hydroperoxide. Reaction 16: Six-membered ring hydroperoxide undergoes further reaction (involving β-scission) to from

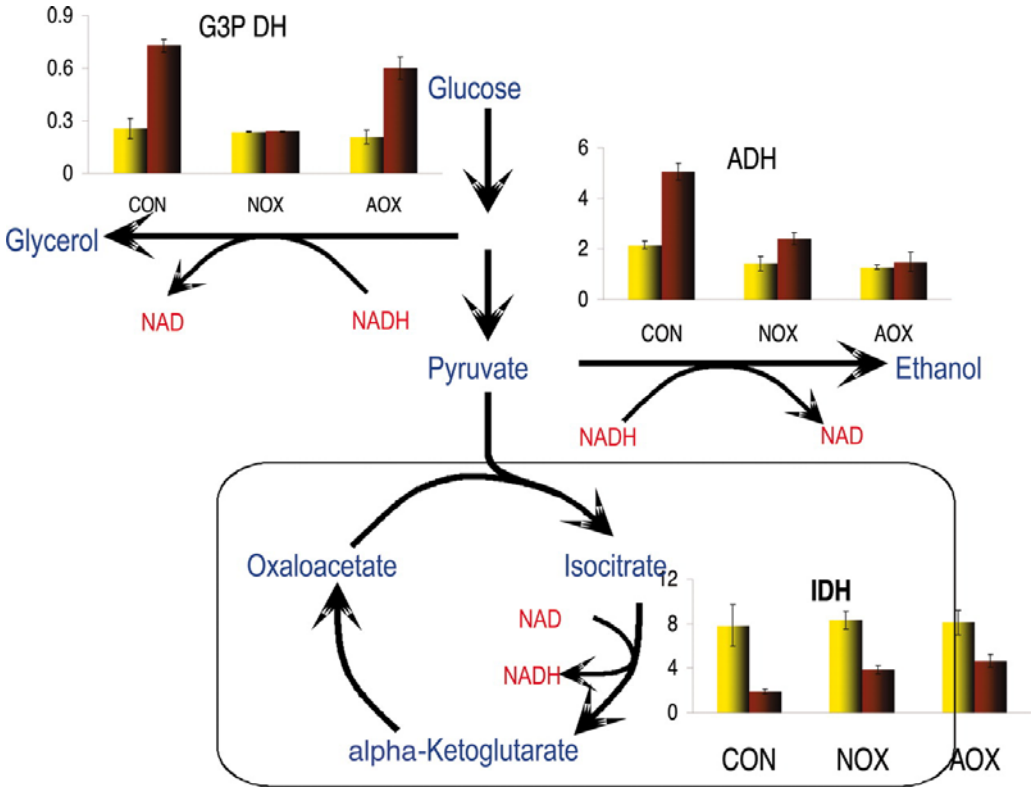
The International Journal of Biochemistry & Cell Biology. 2007,39: 44-84

如何撰写结果：图的使用

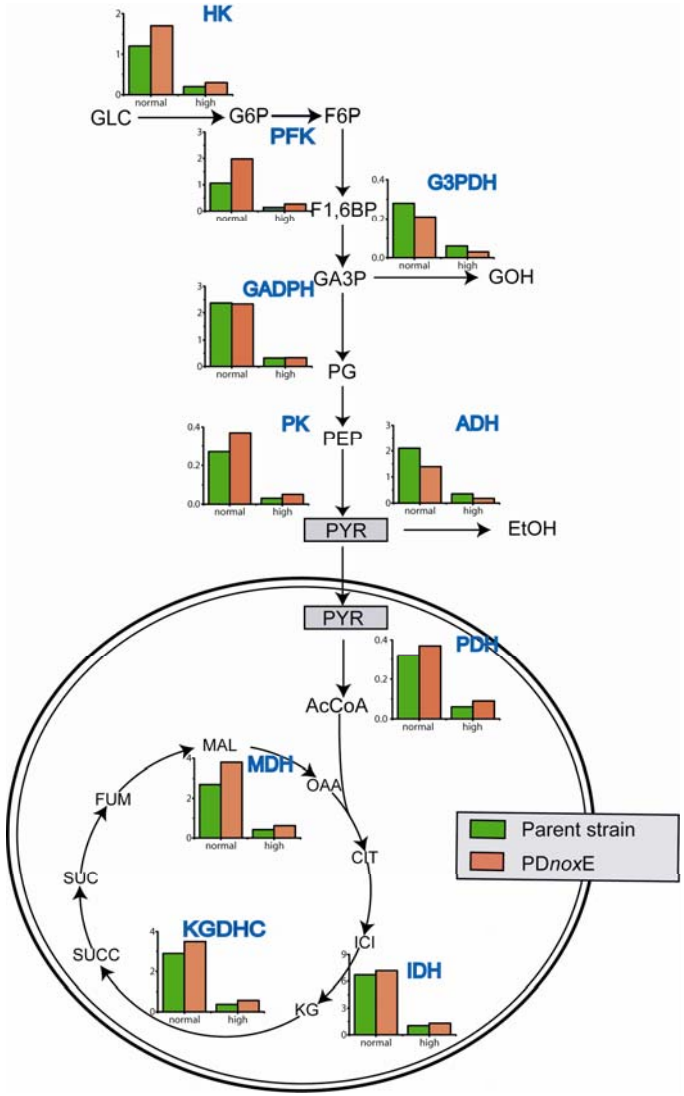

NL 1993
MCI 1997
MCI 2001
AD 2003
H
V
E


pH5.0
pH5.5
Glucose (g/l)
DCW, EPS (g/l)
Time (h)
0
5
10
15
20
25
30
35
40
45
0
2
4
6
8
10
12
14
0
24
48
72
96
120
144
168

如何撰写结果：图的使用



Vemuri G. N. et.al. PNAS 2007;104:2402-2407



Sha xu. et.al.AEM,2008; submitted

如何撰写结果：表的使用

NAD^+ /(mM)	25.7	28.6	29.1
Average $NADH/NAD^+$	0.1	0.045	0.02

表 3 糖酵解和丙酮酸代谢旁路关键酶活性的比较 [a]

Table 3 Comparison of activities of enzymes in glycolytic pathway and pyruvate dehydrogenase bypass

Model	HK	PFK	PK	GAPDH	PDC	ALDH	ADH
I	1.0	1.35	0.45	2.43	9.10	7.8	1.38
II	1.05	1.46	0.53	2.78	9.12	8.28	1.47
III	1.03	1.75	0.56	3.12	9.03	8.51	1.50

Abbreviations: HK: hexokinase; PFK: phosphofructokinase; PK: pyruvate kinase; GAPDH: glyceraldehydes-3-phospate dehydrogenase; PDC: pyruvate decarboxylase; ALDH: acetaldehyde dehydrogenase; ADH: alcohol dehydrogenase.

Model I : Batch culture; II Batch culture with 10 mg/L acetaldehyde; III Fed-batch culture

a: All activity of enzymes were expressed as U/mg protein

如何撰写结果：表的使用

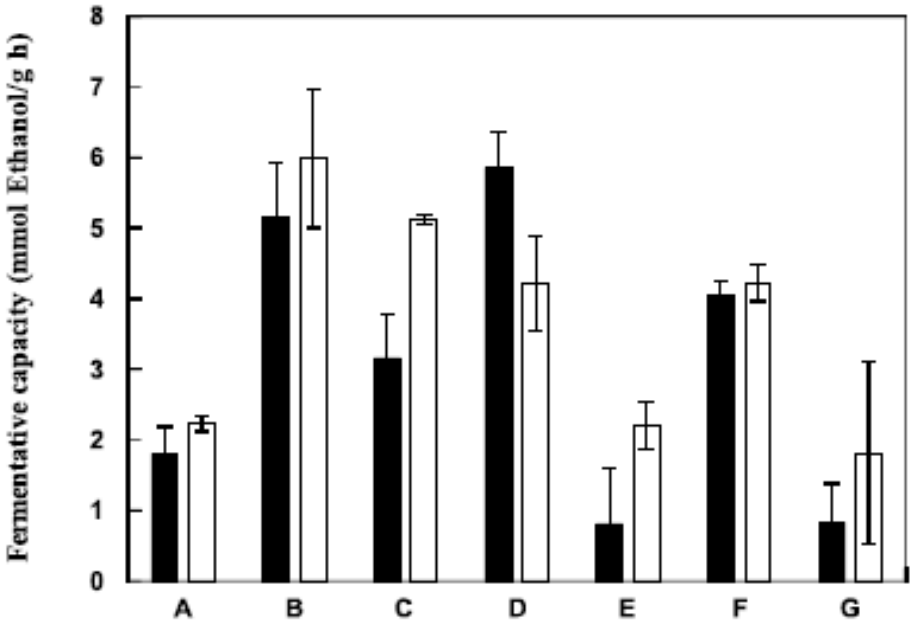
Table 1

Comparison table of programs for building all-atom high-resolution RNA 3D structures.

Software/method	Input	Output	User's input	Comment
MANIP	Database of known fragments and secondary structure	Complex 3D architecture	Rotation, translation of fragments; interactive manipulation.	
S2S	3D structure	Multiple alignments	Interactive manipulation	Need 3D structure
NAB	Secondary structure and distance constraints	3D structure	Interactive manipulation	Possible use of known tertiary RNA structure fragments. Built-in energy minimization and molecular dynamics optimization.
ERNA-3D	Secondary structure	3D structures	Interactive manipulation	Possible use of known tertiary RNA structure fragments
MC-Sym	Secondary structure; distance, torsion and other structural constraints; database of known fragments.	Series of 3D structures		Counterions can be implicitly represented; no interactive manipulation
RNA2D3D	Secondary structure; can also use known fragments.	3D structure	Interactive manipulation if needed	Possible automatic stacking of helices; compactification, kissing loops and pseudoknots. Built-in molecular mechanics and dynamics.
YAMMP (YUP)	Reduced model representations and secondary structure	3D structure	Interactive and batch mode	

Current Opinion in Structural Biology. 2007,17:157-165

如何撰写结果：图表的使用



Strain, glucose concn (mM)	Uptake (μmol/g of protein/min)		
	Unstarved	C starved	N starved
A, 50	305 ± 15	138 ± 6[b] 186 ± 13[c]	120 ± 4[b] 152 ± 3[c]
B, 50	290 ± 7	122 ± 9[b] 118 ± 13[c]	136 ± 30[b] 151 ± 9[c]
A, 10	122 ± 4	60 ± 4[b] 75 ± 5[c]	101 ± 11[b] 105 ± 5[c]
B, 10	151 ± 6	64 ± 5[b] 54 ± 1[c]	89 ± 5[b] 111 ± 12[c]

[a] The assay was performed with two different concentrations of glucose, 50 and 10 mM. The uptake rate was determined five times for each concentration, and means and minimum and maximum values are indicated.
[b] Starvation was performed anaerobically.
[c] Starvation was performed aerobically.

2 如何撰写材料与方法？

材料与方法的重要性

- 科学研究的基本要求是研究结果能够被重复，而快速判定结果能否被重复的途径就是作者所描述的材料与方法。
- 论文提交给同行评议时，**审稿人常常会十分关注并仔细阅读材料与方法部分，如果审稿人对作者是否采取了正确可行的研究方法或技术、或实验能否被重复高度怀凝，就会建议退稿。**而不管研究结果如何的激动人心。
- **清楚、准确描述是如何获得研究结果的;**

材料与方法的写作要点

“材料和方法”部分应清楚、准确描述是如何获得研究结果;

对方法的描述要详略得当、重点突出:

—详细描述实验方法和实验步骤：实验试剂的规格、批号、型号、制造厂家名称、厂址（城市名）等 (以便他人能够重复实验);

— 列举建立方法的参考文献，并做简要描述(但不需全部重复描述);

— 描述要准确(“room temperature” is not an accurate description);

—如果对已有方法进行了新的或实质性的改进，就要清楚地说明改进的理由

—参考拟投稿期刊的表达方式

撰写材料与方法的时态

- 描述的内容为不受时间影响的事实，采用一般现在时：

——A twin-lens reflex camera **is** actually a combination of …

- 描述的内容为特定、过去的行为或事件，采用过去式

——The work **was carried out** on the Imperial College gas atomizer, which has been described in detail elsewhere.

撰写材料与方法的语态

- 习惯采用被动语态：由于所涉及的行为与材料是叙述的焦点，而且读者已知道进行这些行为和采用这些材料的人就是作者本人

——The samples **were immersed** in an ultrasonic bath for 3 minutes in acetone followed by 10 minutes in distilled water. (建议使用)

——We **immersed** the samples in an ultrasonic bath for 3 minutes…. (避免使用)

如果涉及表达作者的观点或看法，则多用主动语态或不定式结构

For the second trial, the apparatus **was covered** by a sheet of plastic. **We believed** this modification would reduce the amount of scattering. (建议使用)

——For the second trial, the apparatus **was covered** by a sheet of plastic **to reduce** the amount of scattering. (建议使用)

——For the second trial, the apparatus was covered by a sheet of plastic. **It was believed** that this modification would reduce the amount of scattering. (避免使用)

3 如何撰写Introduction?

Introduction的重要性

引言是说明论文的写作背景、理由、主要研究成果及其与前人工作的关系，其目的是引导读者进入论文的主题。引言是论文最难写的部分。内容包括:

(1) “为什么要做?” 简要回顾本文所涉及到的科学问题的研究历史，阐述本课题的研究目的。

(2) “别人做了什么工作? 存在什么问题?” 应当对国内外在本课题上的研究作一总结。总结用图表的形式比较好，再辅以适当的论述。不要引一大堆参考文献，要引自己看过的参考文献，这一点请特别注意。

(3) “准备做什么?” 针对他人研究工作中存在的问题，提出自己的思路和研究内容，扼要交代本研究所采用的方法和技术手段等，强调研究的重要性。

Introduction的要素:为什么要做

介绍本研究的相关背景和回顾历史，阐述本课题的研究目的：例如在基础研究方面有何新意，有何应用前景。课题的意义估计不足，说明作者的知识水平不高，估计过分则显得不够严谨。

Lactic acid bacteria are important microorganisms that are widely used in food fermentation industries all over the world. Due to their rapid growth, small genomes and simple metabolism, lactic acid bacteria are attracting increased attention for the production of food and pharmaceutical products (8). To date, *Lactococcus lactis* is the most extensively studied lactic acid bacterium, of which a variety of genetic tools have been developed, leading to the successful production of enzymes (25), therapeutic proteins (48), and nutraceuticals (19). However, compared with the other commonly used prokaryotic hosts, i.e. *Escherichia coli*, the relatively poor growth properties of *L. lactis* hamper the further increase of volumetric productivity when using *L. lactis* to produce certain recombinant products.

Introduction的要素:前人工作

是详尽、全面地介绍以前的相关工作。充分阐述前人包括作者自己已做的相关工作及与本论文的联系。**没有充分阐述研究工作的背景，不引用与本论文相关的重要文献，审稿人至少会认为作者阅读文献不够。**

Cofactors could be divided into metal, vitamin, ATP/ADP/AMP, NADH/NAD^+(or NADPH/$NADP^+$), as well as Coenzyme A (CoA) and its derivatives. Previously, the research group of San et al. (2002) has done a large amount of constructive and novel works, by focusing on the manipulation of the level and form of cofactor NADH/NAD^+ (Berríos-Rivera et al., 2002a–c; Lopez de Felipe et al., 1998; Sánchez et al., 2005) and CoA (Lin et al., 2004, 2005; Vadali et al., 2004a–c). NAD^+ functions as a cofactor in over 300 redox reactions. It was shown that manipulation of the NAD^+/NADH ratio could increase production of industrially useful compounds. Many studies reported that the NAD^+ cofactor manipulation system could improve the production of ethanol and 1,2-propanediol (Berríos-Rivera et al., 2003). In addition, NADH availability limits the yield of succinate and manipulation of NADH leads to an increase in succinate yield. Another important cofactor is CoA and its thioester derivative, acetyl-CoA, both are important precursors of many industrially useful compounds such as esters, poly-3-hydroxybutyrate, lycopene and polyketides. These CoA derivatives are primary intermediates in numerous biosynthetic pathways as well as regulators of several key metabolic reactions. Manipulation of the CoA and acetyl-CoA system enhances the production of isoamyl acetate (Vadali et al., 2004c). Furthermore, the formation of acetate increased significantly because of the increase in carbon flux to the acetate production pathway with an increase in CoA/acetyl-CoA levels in metabolic engineering strain *Escherichia coli*. These results demonstrated that the manipulation of intracellular pool sizes of cofactors such as NADH, NADPH and CoA in microbial cells could result in a regulation of carbon metabolism and redistribution of carbon flux in microorganisms.

For the cofactor ATP system, many studies focused on manipulating ATP level as a tool to enhance the glycolytic flux and then increase the productivity of certain products (Santana et al., 1994; Yokota et al., 1997). In previous studies, decreasing the intracellular ATP level through decreasing the activity of F_0F_1-ATPase and electron transfer chain could increase the glycolytic flux (Koebmann et al., 2002; Santana et al., 1994; Sekine et al., 2001) and the productivity of pyruvate in *Torulopsis glabrata* (Liu et al., 2005, 2006), *E. coli* (Jensen and Michelsen,

Introduction的要素:存在问题

指出在相关领域尚待研究的，也即本文准备涉及的问题。不要过分地批评他人的工作。如不要用这样的句子: “The deficiency of Wang’s approach is …..”, “The problem of these papers…”. 可以不直接涉及作者和参考文献来说明问题: ”However, the mechanism has not been fully understood.” “None of the other phases have been examined in detail.”

指

(1)以however, few, little和no等表示指出过去研究的不足或目前仍缺少某些资料，并引出作者的研究问题:

A However, little research has been devoted to(little attention has been paid to,

B little is known about) X;

However, no studies have investigated (no work has been done on) X;

C However, insufficient data are available on X

(2)以although,while引导、或以but,yet转折的复合句来提出问题

D Although much research have been done on CO2 levels in agricultural soils, little work has been done on levels in forest soils,

研

可

1992). However, few reports are available on the effect of cofactors such as vitamin and metal on the carbon metabolism and distribution of carbon flux in industrial microorganisms.

Introduction的要素:本文的研究内容

在引言部分要将本论文的要点简洁明了地用一、二句话点出来，以便读者在读论文主体前已经有一个大概的印象，这篇论文将围绕什么主题来讨论。用词要注意分寸。

We have chosen the production of pyruvate and α-ketoglutaric acid (α-KG) with *T. glabrata* as a model system to demonstrate the potential role of cofactor (vitamin and metal) levels in carbon flux redistribution.

et al., 2000; Huang et al., 2006). Our previous studies showed that as the by-product, only a little of α-KG could be detected in the pyruvate fermentation broth. In this study, we focused on manipulating cofactor levels as an effective strategy to increase the productivities of both pyruvate and α-KG.

Considering the importance of ATP in current biotechnology, and the observation that most previous reviews concerning ATP focused only on the structure and physiological function of F_0F_1-ATP synthase (Boyer, 1997; Nakamoto et al., 1999; Senior et al., 2002; Weber, 2007; Wittig and Schagger, 2008) and vacuole ATPase (Jefferies et al., 2008; Xiao et al., 2008), the present review is dedicated to strategies to manipulate ATP, their current and potential applications, and the future of ATP-oriented strategies in current biotechnology.

In this study, we attempted to increase the productivity of pyruvate in *T. glabrata*. To achieve this target, we used a novel approach to increase the availability of intracellular NAD^+ through biochemical method, that was, to increase the activity of a biologically active NADH-dependent alcohol dehydrogenase (ADH) and to add electron acceptor to oxidize the excessive NADH at lower DO concentration. In the presence of acetaldehyde, the excessive NADH was oxidized to NAD^+, and a lower intracellular ATP and higher pyruvate productivity could be achieved. The new system would allow the cells subject to a lower ratio of NADH/NAD^+ and ATP level, and therefore, a higher pyruvate productivity under lower DO could be obtained.

Introduction的时态

介绍已有的知识时，使用现在时；叙述本人或他人近期的工作或认识时，采用过去时：

A 研究背景：

(1)介绍一般性资料、现象或普遍事实时，用一般现在时

Acid rain is a serious problem in many areas of Europe(Scott,1990)

(2)引述其他学者的研究行为时通常采用一般过去时，常以**that**从句叙述被引作者的研究结果**(**从句中的动词时态视表达资料的性质而定**)**

Chen showed (found, reported, noted, suggested, observed, pointed out) that the water boils at 100 ºC(普遍事实)； that reducing the amount of oxygen caused the deposition rate to drop sharply(具体情况有效)

当that从句是不确定的结果时，用suggested等臆测动词和may+现在时：

Ross suggested (hypothesized, proposed, argued) that reducing the duration of school vacations may help children to retain more of what they learn in class.

(3)描述特定研究领域最近的某种趋势或强调表示某些最近发生的事件对现在的影响，应现在完成时

Several researchers have studied (investigated, examined, explored, considered, discussed) the role of computers in classroom instruction

Introduction的时态

B 存在问题:

(1)叙述普遍事实，用现在时

Little is known about X

(2)如果描述过去已开始并持续到现在的趋势或事件，用现在完成时

Few studies have been dong on X 或Little attention has been devoted to X

Introduction的时态

C 研究目的:

(1)用**paper, report, thesis**等表示论文提供资料的行为，重点在于介绍新的技术或方法、分析某个问题或提出某个论证，使用一般现在时

The purpose (aim, objective) of this paper is to analyze the effect of X on Y.

In this paper, we propose a novel model for sorting X

(2)采用**study, research, investigation**或**experiment**等介绍研究活动，重点在提出某个调查或实验结果，涉及的是已经结束的事情，用一般过去时

In this research, we investigated the effects of X

The purpose of the experiment reported here was to investigate……

(3)由于涉及的资料将要在论文中被提出来，使用将来时**(**句子中有**purpose, aim, objective**等名词时除外**)**

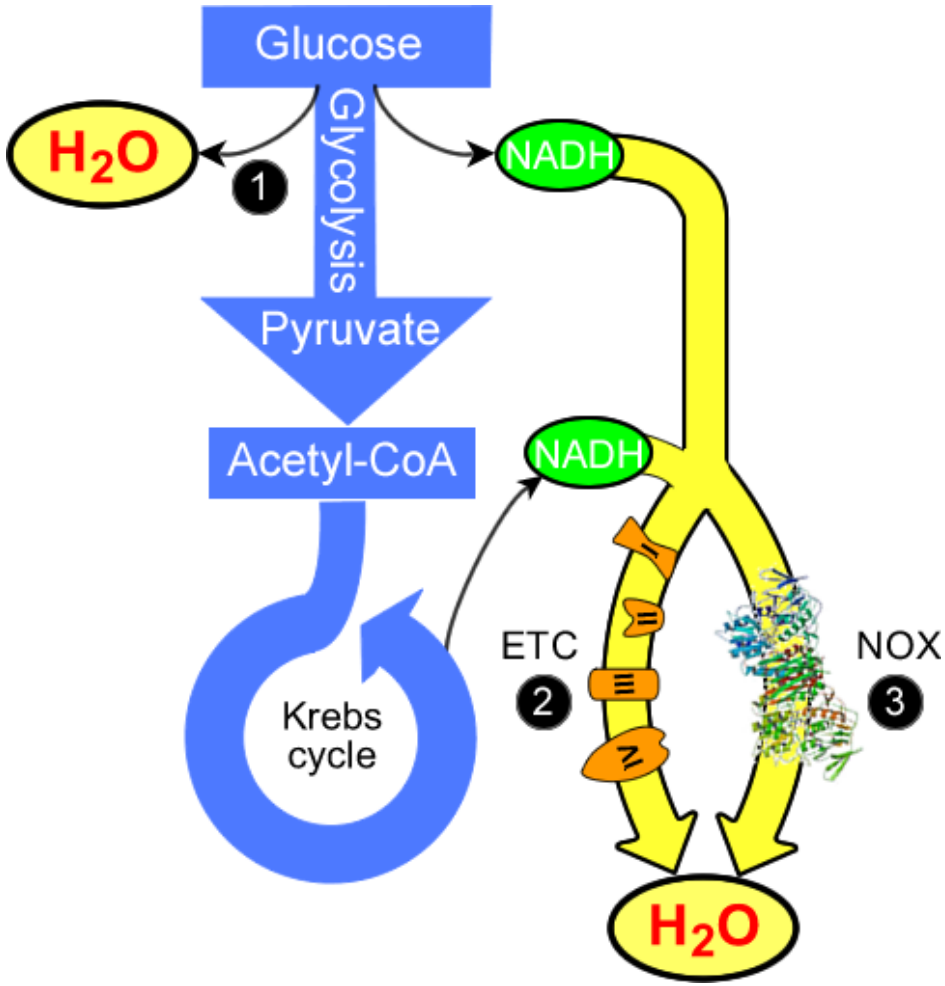
This paper will propose (present, evaluate, discuss) a new method for analyzing Z

但: The study was designed to evaluate…..

Introduction实例

- 丙酮酸作为一种重要的工业原料，不仅在化工、制药及农用化学品工业中有着广泛的用途，在食品保健业也具有巨大的市场潜力。最近，广东太阳神集团以丙酮酸钙制成减肥胶囊即为一例。日益增长的市场需求，使得研究者对发酵法生产丙酮酸的兴趣不断增大[1]。（为什么要做）
- 球拟酵母(Torulopsis)的维生素营养缺陷型具有大量积累丙酮酸的潜力，曾有一些学者研究过溶氧对其产酸性能的影响。Miyata和Yonehara认为供氧不足会造成丙酮酸产量下降，而乙醇产量显著增加[2]；Hua和Shimizu等则利用代谢通量分析方法研究了不同溶氧水平下Torulopsis glabrata胞内的代谢流分配[3,4]。作者在前期工作中也发现，较高的溶氧有利于丙酮酸的积累[5]。（别人做了什么工作?）但是，若要实现丙酮酸发酵过程高产量、高产率和高生产强度的统一，溶氧应当高到什么程度，在发酵过程中应当采取何种控制策略，这是已有文献尚未阐明的问题。（存在什么问题?）
- Torulopsis glabrata WSH-IP12是一株能够积累丙酮酸的多重维生素营养缺陷型[6]。作者对其进行诱变改良，获得了一株产丙酮酸性能更佳的T. glabrata突变株WSH-IP303[7]。在优化了培养基中维生素浓度的基础上[8]，本文首先分析了不同体积传氧系数下(溶氧均高于50%)WSH-IP303发酵的动力学特征，根据主要动力学参数(m、qs和qp)的变化特性提出了分阶段供氧控制模式。然后，实验验证了该模式在实现丙酮酸高产量和高产率的统一上的有效性，并对不同供氧方式下细胞的代谢活性进行了讨论。（准备做什么?）

Introduction实例



4 如何撰写Discussion？

Discussion的重要性

- What do we learn from this research?
- 概括主要发现，不要重复前言和结果
- 引用可以支持你的文章，但不会影响或降低文章的创新性
- 主要缺点（或局限性）是什么？为什么？
- 不要做太多假设，不要夸大不能被实验数据完全支持的结论
- 在文章的最后突出研究的重要性!

Discussion的内容

第一段：总结性地阐述本研究结果

The study described here demonstrated that the GSH imported by *L. lactis* ssp. *cremoris* SK11, or produced by engineered strain of *L. lactis* ssp. *cremoris* NZ9000, can protect both strains against a long-term mild acid challenge and a short-term severe acid challenge. This increases our knowledge on the physiological role of GSH in *L. lactis* besides its role in protecting the cells from oxidative stress (11, 17). The GSH in SK11(GSH+) cells and NZ9000(pNZ3203) cells displayed similar profile of protection when challenged at pH 2.5 or at pH 4.0 (Fig. 2). However, more detailed comparative studies suggested the mechanisms behind the protective roles of GSH in these two strains may differ.

Discussion的内容

第二、三段：概述最重要的结果，并指出其是否与先前的假设或其他学者的结果一致；如果不一致的话，为什么？对结果提出说明、解释或猜测；根据这些结果，能得出何种结论或推论？

Investigation of the changes in pH_i, GSH_{in}, and GAPDH activity in SK11(GSH^+) cells allowed us to propose putative protective mechanisms of GSH for strain SK11. One of the proposed mechanisms is prevention of the rapid decline of pH_i using GSH as a sacrificial substance. We have shown that SK11 (GSH^+) cells had a significantly higher pH_i than the control when challenged at pH 2.5 for 30 min and at pH 4.0 for longer than 4 h (Fig. 3). A previous study showed that an induced increase of pH_i in *L. lactis* subsp. *cremoris* 712 protects the cells from lethal acidification (20). We therefore believe the maintenance of a significantly higher pH_i in SK11(GSH^+) cells during acid challenge contributed to the significantly increased survival rate. The presence of GSH itself did not increase the initial pH_i, since SK11(GSH^+) and SK11(GSH^-) cells had comparable pH_is prior to acid challenge (Fig. 3A, 0-h data), so it can be assumed that the addition of GSH did not disturb the intracellular pH homeostasis. However, we observed that most GSH disappeared before severe killing took place (Fig. 4A). The depletion of GSH is not due to the exchange between the reduced-form GSH and the oxidized form, GSSG, since the enzymatic recycling method that we used determines the total GSH concentration (GSH plus GSSG) (29). The disappearance of the intracellular GSH in SK11 cells suggests that GSH might be bound to certain cellular components in an irreversible manner, since the GSH bound to a protein via a disulfide bond (G-S-S-protein) can still be reduced and recovered by the glutathione reductase present in the assay (29) and ultimately detected. Alternatively, GSH may be acting as a trap for acid, which consequently protects vital cellular constituents from

The second protective mechanism which may take place in SK11(GSH^+) cells is the protection of GAPDH via S thiolation. The fact that certain irreversible damage can be prevented by protein S thiolation, in which protein SH groups form mixed disulfides with low-molecular-mass thiols, such as GSH (16), has been investigated, and GAPDH has been identified as the major target of S thiolation (26). Improvement of GAPDH activity in the presence of GSH in eukaryotic cells has been reported (13, 22). We postulate that the GAPDH in SK11 (GSH^+) cells was protected by S thiolation with GSH, which resulted in a slow decrease of GAPDH activity upon acid challenge. The S -thiolation of GAPDH may be related to the decrease of GSH_{in}; however, it may not account for the depletion of GSH, since the S thiolation is reversible.

Discussion的内容

第四段：指出结果的理论意义

these two species remains unknown. Although the primary physiological function of GSH is involved in oxidative stress resistance, we show that GSH can protect *L. lactis* against acid stress. The improvement of acid stress resistance of *L. lactis* upon introduction of GSH provides a new model with which to investigate the mechanism for acid stress resistance in *L. lactis*. It also provides a model with which to further investigate the role of GSH in acid stress resistance, which is less well known than the role of GSH in oxidative-stress resistance. Moreover, the results presented here are also of industrial importance, especially in the case of strain SK11, which is widely used by the dairy industry in cheese making (27). Since the growth and storage environments for a starter culture are normally acidic, greater stability of the starter culture can be obtained by selecting a starter strain which can accumulate GSH or by introducing GSH biosynthetic capability from a GRAS (generally regarded as safe) organism into a starter strain using a food-grade vector.

This study demonstrated that, the product inhibition in organic acid fermentation caused by high osmotic stress could be eliminated, and pyruvate production could be significantly increased by enhancing *T. glabrata* osmotic stress tolerance through a pH-controlled continuous culture. In addition, increasing the pyruvate production in *T. glabrata* through enhancing osmotic-tolerance may provide an alternative approach for effective production of other organic acids.

Discussion的表达与时态

A 回顾研究目的:

回顾研究目的时，通常使用过去时:

This research investigated the effects of two different inhibitors on the growth of yeast;

In this study, the effects of two different inhibitors on the yeast growth were investigated;

B 概述重要结果:

所概述结果的有效性之针对本次特定的研究，用过去时；普遍性，用现在时:

In the first series of experiments, the experimental values were all lower than the theoretical predictions;

Our findings are in substantial agreement with those of smith.

The experimental and theoretical values for the yields agree well.

Discussion的表达与时态

C说明结果或阐述相关推论:

(1)说明结果时多采用主从复合句，主句动词为表示可能性的现在时动词，从句动词为现在时说明具有普遍性而过去时则只限于特定研究

It is possible (may be, is likely) that adding water causes the reaction rate to increase;

These results can be explained by assuming that adding water caused the reaction rate to increase.

(2)阐述由结果得出的结论时，通常使用现在时。

The data reported here suggest (these finding support the hypothesis, our data provide evidence) that the reaction rate may be determined by the amount of oxygen available.

The reaction rate is determined by the amount of oxygen available.

Discussion的表达与时态

D 研究方法或结果局限性及相关建议:

(1)指出研究局限时，如果是作者已完成的研究事实，使用过去时

Only two sets of conditions were tested**.**

如果作者指出自己方法、模型或分析的局限性时，使用现在时。

Our findings may be only valid for female.

The method presented here is accurate, but can not be implemented in real-time applications.

(2)建议新的题目或进一步研究方向时，使用现在时。

We suggest that these experiments be repeated using a wider range of initial conditions

It would be interesting to learn why oxygen is depleted during this type of sputtering

Experiment should be conducted using different age groups.

Discussion的表达与时态

E 结果的理论意义或实际应用

表叙结果的理论意义或实际应用时，使用现在时，辅以may, might, should等.

The results of this study may lead to the development of effective methods for teaching grammar to language immersion student.

Our findings may be useful to educator.

5 如何撰写Abstract？

摘要的重要性

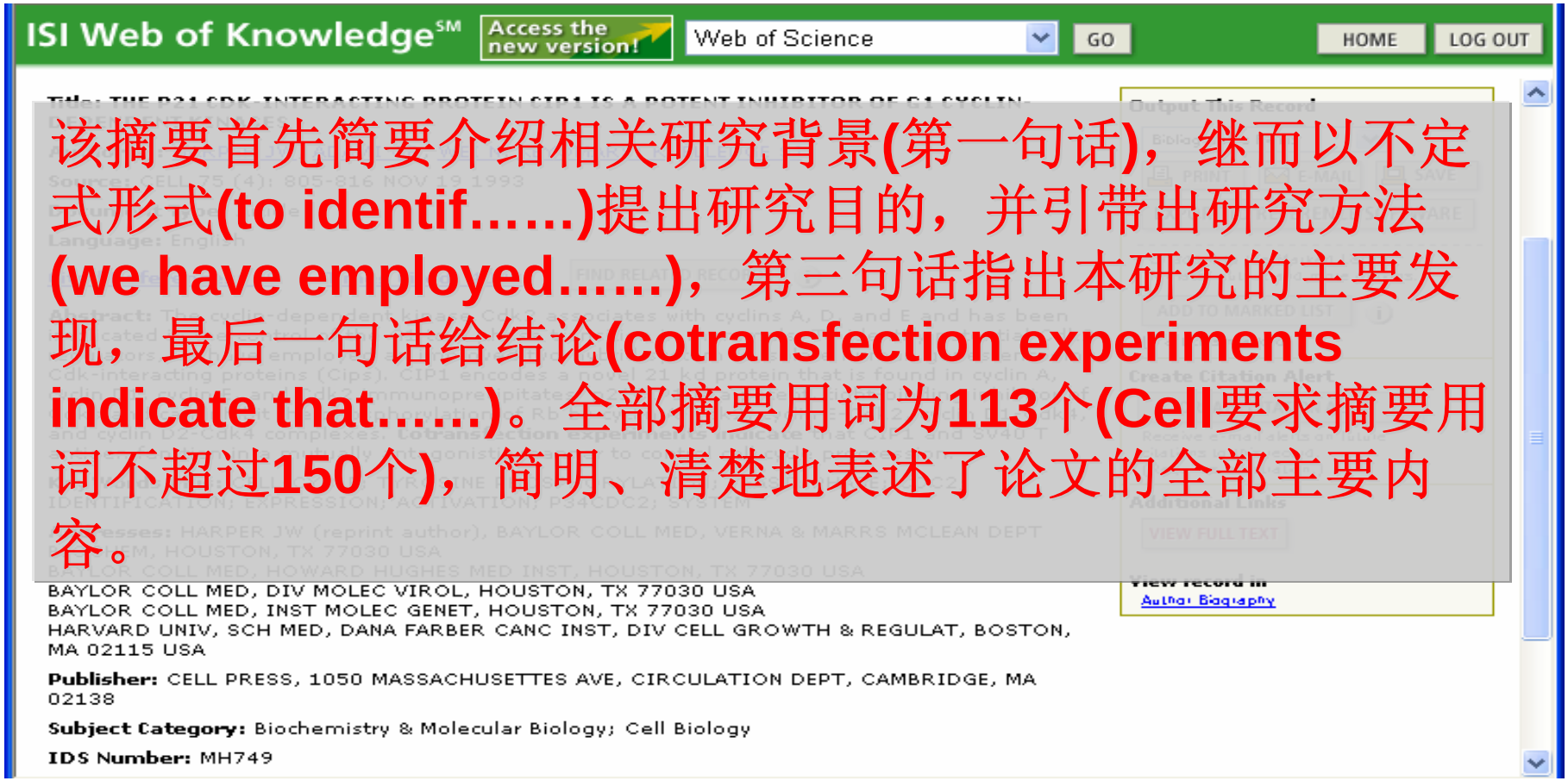
- 写文章的目的;
- 摘要概述了论文的所有要点;
- 摘要的读者面比论文全文的读者面大得多;
- 摘要给人第一口苹果的品尝效果;
- 审稿人一般用15分钟看摘要和引言。如果第一印象不好，他/她会去寻找理由建议主编退稿

摘要类型与实例

- 报道性摘要(Informative abstract)
- 指示性摘要(Indicative abstract)
- 报道指示性摘要(Informative- indicative abstract)
- 结构式摘要(Structured Abstract)

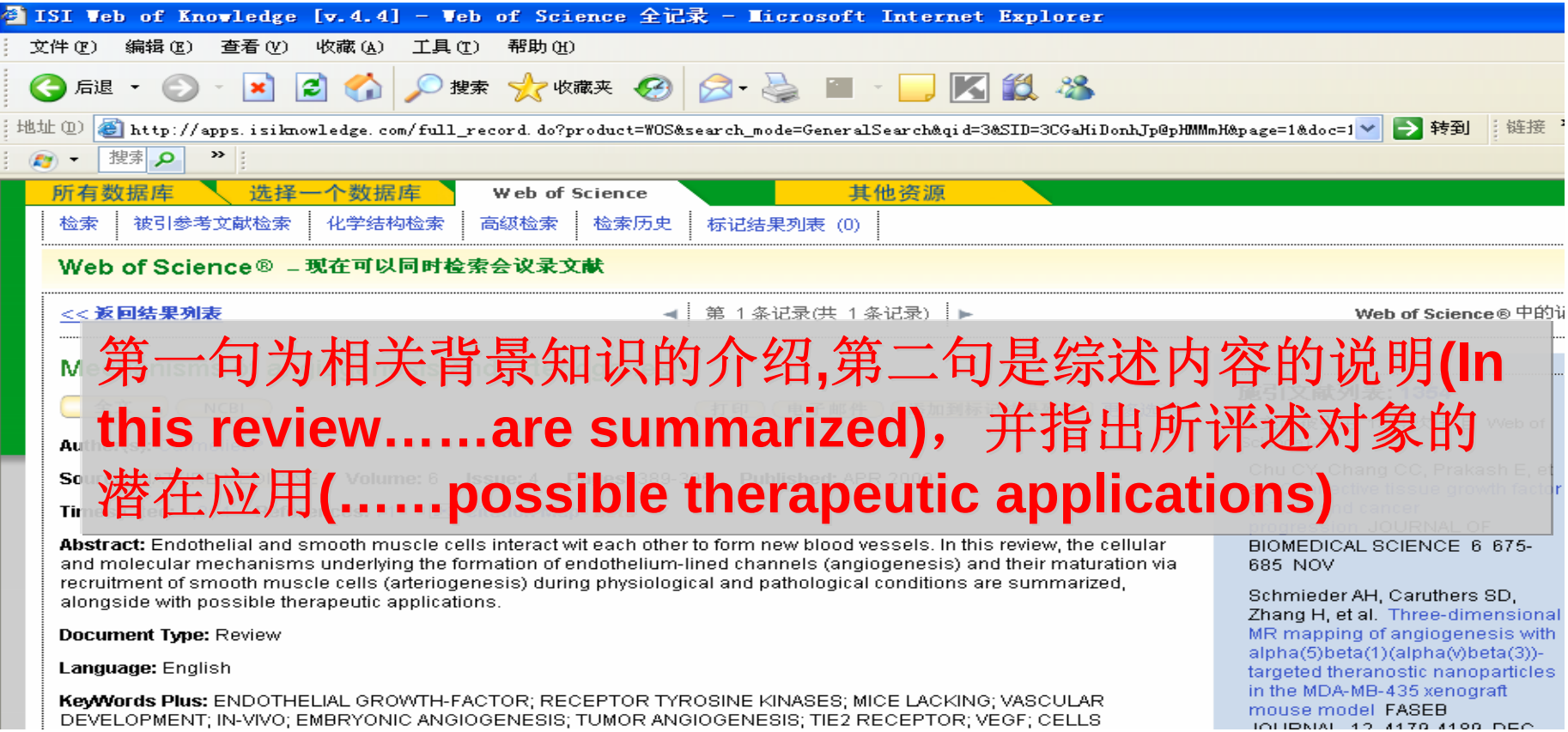
摘要类型与实例：报道性摘要

报道性摘要(Informative abstract)：也称信息性摘要或资料性摘要，特点是全面、简要地概括论文的目的、方法、主要数据和结论。通常，这种摘要可部分地取代阅读全文。



摘要类型与实例：指示性摘要

指示性摘要(indicative abstract)： 也称说明性摘要、描述性摘要(descriptive abstract)或论点摘要(topic abstract)，一般只用二三句话概括论文的主题，而不涉及论据和结论，多用于综述、会议报告等。该类摘要可帮助潜在的读者来决定是否需要阅读全文。



摘要类型与实例：报道-指示性摘要

报道-指示性摘要(informative- indicative abstract)：以报道性摘要的形式表述一次文献中的信息价值较高的部分，以指示性摘要的形式表述其余部分

摘要类型与实例：结构性摘要

结构式摘要(structured abstract)：该摘要实质上是报道性摘要的结构化表达。(1) 目的(Objective): 研究的问题、目的或设想等;(2) 方法(methods): 研究的思路及采用的策略;(3) 结果(results):研究的主要发现; (4) 结论(Conclusions): 主要结论; (5) 意义(Significance): 研究的潜在应用。

<< 返回结果列表 ◄ 第 1 条记录(共 1 条记录) ► Web of Science® 中的

Increasing glycolytic flux in Torulopsis glabrata by redirecting ATP production from oxidative phosphorylation to substrate-level phosphorylation

全文 NCBI 打印 电子邮件 添加到标记结果列表 更多选项

Author(s): Liu LM, Li Y, Du GC, Chen J

Source: JOURNAL OF APPLIED MICROBIOLOGY **Volume:** 100 **Issue:** 5 **Pages:** 1043-1053 **Published:** MAY 2006

Times Cited: 1 **References:** 39 Citation Map *beta*

Abstract: Aims: This study aimed at further increasing the pyruvate productivity of a multi-vitamin auxotrophic yeast Torulopsis glabrata by redirecting ATP production from oxidative phosphorylation to substrate-level phosphorylation.

Methods and Results: We examined two strategies to decrease the activity of F0F1-ATPase. The strategies were to inhibit F0F1-ATPase activity by addition of 9 oligomycin, or to disrupt F0F1-ATPase by screening neomycin-resistant mutant. The addition of 0(.)05 inmol 1(-1) oligomycin to the culture broth of T. galabrata CCTCC M202019 resulted in a significantly decreased intracellular ATP level (35(.)7%) and a significantly increased glucose consumption rate (49(.)7%). A neomycin-resistant mutant N07 was screened and selected after nitrosoguanidine mutagenesis of the parent strain T. glabrata CCTCC M202019. Compared with the parent strain, the F0FI-ATPase activity of the mutant N07 decreased about 65%. As a consequence, intracellular ATP level of the mutant N07 decreased by 24%, which resulted in a decreased growth rate and growth yield. As expected, glucose consumption rate and pyruvate productivity of the mutant N07 increased by 34% and 42.9%, respectively. Consistently, the activities of key glycolytic enzymes of the mutant N07, including phosphofructokinase, pyruvate kinase and glyceraldyde-3-phosphate dehydrogenase, increased by 63.7%, 28.8% and 14.4%, respectively. In addition, activities of the key enzymes involved in electron transfer chain of the mutant N07 also increased.

Conclusions: Impaired oxidative phosphorylation in T. glabrata leads to a decreased intracellular ATP production, thereby increasing the glycolytic flux.

Significance and Impact of the Study: The strategy of redirecting ATP production from oxidative phosphorylation to substrate-level phosphorylation provides an alternative approach to enhance the glycolytic flux in eukaryotic in micro-organisms.

施引文献列表: 1

本文已被引用 1 次(来自 Web of Science)。

Liu LM, Li Y, Zhu Y, et al. Redistribution of carbon flux in Torulopsis glabrata by altering vitamin and calcium level METABOLIC ENGINEERING 1 21-29 JAN

[查看全部施引文献，共 1 篇]

创建引文跟踪

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根据共被引的参考文献查找相似记录(来自 Web of Science)。

[查看 Related Records]

参考文献: 39

查看此记录的题录信息(来自 Web of Science)。

其他信息

- 查看期刊的 impact factor (来自 Journal Citation Reports)

如何撰写摘要：高频词汇

引言部分

(1)回顾研究背景，常用词汇有**review, summarize, present, outline, describe**等

(2)说明写作目的，常用词汇有**purpose, attempt, aim**等，另外还可以用动词不定式充当目的壮语来表达

(3)介绍论文的重点内容或研究范围，常用词汇有**study, present, include, focus, emphasize, emphasis, attention**等

方法部分

(1)介绍研究或试验过程，常用词汇有**test study, investigate, examine,experiment, discuss, consider, analyze, analysis**等

(2)说明研究或试验方法，常用词汇有**measure, estimate, calculate**等

(3)介绍应用、用途，常用词汇有**use, apply, application**等

如何撰写摘要：高频词汇

结果部分

(1)展示研究结果，常用词汇有**show, result, present**等

(2)介绍结论，常用词汇有**summary, introduce,conclude**等

讨论部分

(1)陈述论文的论点和作者的观点，常用词汇有**suggest, repot, present, expect, describe**等

(2)说明论证，常用词汇有**support, provide, indicate, identify, find, demonstrate, confirm, clarify**等

(3)推荐和建议，常用词汇有**suggest, suggestion, recommend, recommendation, propose, necessity, necessary, expect**等。

如何撰写摘要：时态

摘要写作时所采用的时态应视情况而定，力表达自然

（1）介绍背景资料时，如果句子的内容为不受时间影响的普偏事实，使用现在时，如果句子的内容是对某种研究趋势的概述，使用完成时。

例如The **authors review** risk and protective factors for drug abuse, assess a number of approaches for drug abuse prevention potential with high-risk groups, and make recommendations for research and practice。

PSYCHOLOGICAL BULLETIN 112 (1): 64-105 JUL 1992《心理学通报》American Psychological Association

例如**Abstract:** In this study, we describe a psychobiological model of the structure and development of personality that accounts for dimensions of both temperament and character. Previous research has **confirmed** four dimensions of temperament: novelty seeking, harm avoidance, reward dependence, and persistence, which are independently heritable, manifest early in life, and involve preconceptual biases in perceptual memory and habit formation.

ARCHIVES OF GENERAL PSYCHIATRY 50 (12): 975-990 DEC 1993 《普通精神病学纪要》Archives of General Psychiatry

如何撰写摘要：时态

(2)在叙述研究目的或者主要研究活动时，如果采用论文导向，多使用现在时如 **This paper present;** 如果采用研究导向 使用过去时 **This study investigated**

例1 The author **summarizes** the basic concepts that define the discipline of psychosocial rehabilitation and discusses how those concepts have at times been distorted in actual practice。

AMERICAN JOURNAL OF PSYCHIATRY 149 (11): 1455-1463 NOV 1992
《美国精神病学杂志》

例12 We **investigated whether** captopril could reduce morbidity and mortality in patients with left ventricular dysfunction after a myocardial infarction.

NEW ENGLAND JOURNAL OF MEDICINE 327 (10): 669-677 SEP 3 1992
《新英格兰医学杂志》

如何撰写摘要：时态

(3) 概述实验程序、方法和主要结果时，通常使用现在时

例1 **Abstract:** We **describe** a new molecular approach to analyzing the genetic diversity of complex microbial populations. This technique is based on the separation of polymerase chain reaction-amplified fragments of genes coding for 16S rRNA, all the same length, by denaturing gradient gel electrophoresis (DGGE).

APPLIED AND ENVIRONMENTAL MICROBIOLOGY 59 (3): 695-700 MAR 1993 《应用与环境微生物学》

例2 Our **results indicate** that **p21** may be a universal inhibitor of cyclin kinases.

NATURE 366 (6456): 701-704 DEC 16 1993 《自然》

如何撰写摘要：时态

(4) 叙述结论或建议时，可使用现在时、臆测量动词或**may ,should could** 等助动词，例如

We **suggest** that **climate instability** in the early part of the last interglacial may have delayed the melting of the Saalean ice sheets in America and Eurasia, perhaps accounting for this discrepancy

NATURE 364 (6434): 218-220 JUL 15 1993

如何撰写摘要：人称与语态

- 一般使用第三人称、过去时和被动语态；
- 调查表示，被动语态的使用在**1920-1970**年比较流行；
- 目前大多数期刊使用主动语态，**Nature**、**Cell** 其中第一人称和主动语态使用普遍；
- 一半以上的期刊告戒作者在论文中不要使用可识别作者身份的自引如**In our earlier work** 或其他有关识别作者所在单位的信息。

如何撰写摘要：操作模式

第一句话：讲一下你这篇文章的研究意义（但是有的杂志不需要这句话）

第二句话： 以 **To eluicdatie the mechanism..., To investigate.... ,或者for the purpose of ....**开头来讲述你这样研究的目的;

第三句话： **.... was carried out .... with ...treatment.** 讲述你研究的内容，研究的方法;

第四句话： **The resulted showed that .....,** 讲述你这样研究得出的主要研究结果;

第五句话： **The result of the present work implied that...** 讲述由你的研究结果得出的结论。

效果：国外同行根据英文摘要和图表，可以大致看懂全文。

如何撰写摘要：实例

摘 要：为进一步提高光滑球拟酵母发酵生产丙酮酸的水平（**文章的目的**），在途径分析的基础上提出了一种组成型降低丙酮酸脱酸酶、但增强乙酰辅酶A合成酶活性的育种策略。通过亚硝基胍诱变（**研究过程和使用方法**），获得一株乙酸需求型突变株CCTCC M202019，在外加乙酸的培养基中表现出高于出发株21%的丙酮酸生产能力和良好的遗传稳定性。检测突变株CCTCC M202019中丙酮酸代谢相关酶的活性，发现(1)丙酮酸脱羧酶活性降低了40%；(2)外加乙酸与否的条件下，乙酰辅酶A合成酶的活性分别提高了103.5%和57.4%；(3)添加乙酸和突变对丙酮酸羧化酶、丙酮酸脱氢酶系、乙醇脱氢酶和乙醛脱氢酶的活性没有显著影响。在含有乙酸的培养基中突变株细胞干重比出发株高21.7%，可能是因为乙酰辅酶A合成酶活性的提高，补充了因丙酮酸脱羧酶活性降低而引起的胞质乙酰辅酶A短缺。在7 L罐中含有6 g/L乙酸钠的培养基中发酵62 h，丙酮酸产量达到68.7 g/L，对葡萄糖的产率为0.651 g/g（**主要结果和结论**）。

如何撰写摘要：实例

The manuscript described improving ATP supply to enhance the growth performance of *Torulopsis glabrata* by addition of citrate as auxiliary energy substrate. When 50 mmol·L-1 citrate was supplemented to the culture medium, the intracellular ATP concentration were increased by 20.5% (pH 5.5), 20.4% (pH 5.0) and 39.3% (pH 4.5), and resulted in increasing of pH gradients among of culture broth, cytoplasm and vacuole. As a consequence, the cell growth and pyruvate production of *T. glabrata* CCTCC M202019 at low pH conditions were prominently improved. The results indicated that acid tolerance of the yeast can be achieved by improved ATP supply.

6 如何拟定Title?

题名的要求

- **准确(Accuracy)**

  题名要准确地反映论文的主要内容

- **简洁(Brevity)**

  题名应当言简意亥，以最少的文字概括尽可能多的内容

- **清楚(Clarity)**

  题名要清晰地反映文章的具体内容和特色，明确表明研究工作的独到之处，力求简洁有效、重点突出

题名类型

- 主-副题名
- 系列题名
- 名词性词组题名
- 陈述句题名

题名类型：主副题名

- **Title: Gapped** BLAST **and PSI-**BLAST**: a new generation of protein database search programs** （空位BLAST(碱基局部对准检索)和特殊位置重复BLAST：新一代蛋白质数据库检索程序）
- **Author(s): Altschul SF**, Madden TL, Schaffer AA, Zhang JH, Zhang Z, Miller W, Lipman DJ
- **Source:** NUCLEIC ACIDS RESEARCH 25 (17): 3389-3402 SEP 1 1997 《核酸研究》英国
- SCI被引用2065次
- 作者采用主-副题名相结合的方式较醒目地给出了论文的主题：基于Position--Specific Iterated(PSI)特殊位置重复的gapped BLAST programs空位碱基局部对准检索程序，并在冒号后进一步说明PSI-BLAST是新一代的protein database search programs.

题名类型：主副题名

- THOMPSON JD, HIGGINS DG, GIBSON TJ
- CLUSTAL-W - IMPROVING THE SENSITIVITY OF PROGRESSIVE MULTIPLE SEQUENCE ALIGNMENT THROUGH SEQUENCE WEIGHTING, POSITION-SPECIFIC GAP PENALTIES AND WEIGHT MATRIX CHOICE
- **NUCLEIC ACIDS RESEARCH** 22 (22): 4673-4680 NOV 11 1994
- **SCITimes Cited:** 22192 次
- Altschul SF, Madden TL, Schaffer AA, et al.
- Gapped BLAST and PSI-BLAST: a new generation of protein database search programs **NUCLEIC ACIDS RESEARCH** 25 (17): 3389-3402 SEP 1 1997
- **SCI Times Cited:** 19874 次
- Thompson JD, Gibson TJ, Plewniak F, et al.
- The CLUSTAL_X windows interface: flexible strategies for multiple sequence alignment aided by quality analysis tools
- **NUCLEIC ACIDS RESEARCH** 25 (24): 4876-4882 DEC 15 1997
- **SCI Times Cited:** 10078 次

《核酸研究》1990-2006被引用次数最多的前3篇论文就是主-副题名相结合

题名类型：名词性词组

- **Title: Processing of** X-ray **diffraction data collected in oscillation mode**（震荡模式中X射线衍射数据的分析方法）
- **Author(s): Otwinowski Z**, Minor W
- **Source:** MACROMOLECULAR CRYSTALLOGRAPHY, PT A METHODS IN ENZYMOLOGY 276: 307-326 1997 《酶学方法》美国 Elsevier
- SCI被引16161次，该题名堪称准确、简洁、清楚的典范，即用7个实词和2个虚词清晰地说明了论文的研究主题内容为"Processing",对象是"X-ray diffraction data collected in oscillation mode".

题名类型：系列题名


All Databases
Select a Database
Web of Science
Additional Resources
Search
Cited Reference Search
Structure Search
Advanced Search
Search History
Marked List (0)
Web of Science®
典型系列题名
<< Back to results list
Record 1 of 34
Record from Web of Science®
DENSITY-FUNCTIONAL THERMOCHEMISTRY .3. THE ROLE OF EXACT EXCHANGE
Holdings
Go
Print
E-mail
Add to Marked List
Save to EndNote Web
more options
Author(s): BECKE AD
密度函数的热化学：3.正解交换的作用
Source: JOURNAL OF CHEMICAL PHYSICS Volume: 98 Issue: 7 Pages: 5648-5652 Published: APR 1 1993
Times Cited: 21,233 References: 19
Abstract: Despite the remarkable thermochemical accuracy of Kohn-Sham density-functional theories with gradient corrections for exchange-correlation [see, for example, A. D. Becke, J. Chem. Phys. 96, 2155 (1992)], we believe that further improvements are unlikely unless exact-exchange information is considered. Arguments to support this view are presented, and a semiempirical exchange-correlation functional containing local-spin-density, gradient, and exact-exchange terms is tested on 56 atomization energies, 42 ionization potentials, 8 proton affinities, and 10 total atomic energies of first- and second-row systems. This functional performs significantly better than previous functionals with gradient corrections only, and fits experimental atomization energies with an impressively small average absolute deviation of 2.4 kcal/mol.
Document Type: Article
《化学物理学杂志》美国
Language: English
KeyWords Plus: MOLECULAR-ENERGIES; GAUSSIAN-1 THEORY; 2ND-ROW COMPOUNDS; ELECTRON-GAS; APPROXIMATION; SURFACE
Addresses: BECKE, AD (reprint author), QUEENS UNIV, DEPT CHEM, KINGSTON K7L 3N6, ONTARIO CANADA
Publisher: AMER INST PHYSICS, CIRCULATION FULFILLMENT DIV, 500 SUNNYSIDE BLVD, WOODBURY, NY 11797-2999
Subject Category: Physics, Atomic, Molecular & Chemical
IDS Number: KV997
ISSN: 0021-9606
系列题名（Series Title）是指主题名相同，但文章序号和副题名不同的系列论文的题名
Cited by: 21233
This article has been cited 21233 times (from Web of Science).
Almog J, Stepanov N, Dubnikova ... Protection of the carbonyl groups in 1,2-diketones: propellane versus acetal formation TETRAHEDRON LETTERS 11 1870-1876 MAR 10
Achelle S, Ramondenc Y, Dupas G, et al. Bis- and tris(arylethynyl)pyrimidine oligomers: synthesis and light-emitting properties TETRAHEDRON 12 2783-2791 MAR 17
Schumacher M, Goldfuss B Umpolung catalysis: assessment of catalyst and substrate reactivities in acyloin type reactions TETRAHEDRON 8 1648-1653 FEB 18
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View author biographies (in ISI HighlyCited.com)
Suggest a correction
If you would like to improve the quality of this product by suggesting corrections, please fill out this form.

题名类型：陈述句题名

Title: THE P21 CDK-INTERACTING PROTEIN CIP1 IS A POTENT INHIBITOR OF G1 CYCLIN-DEPENDENT KINASES（p21Cdk作用蛋白(又称Cip1)是G1细胞周期依赖性蛋白激酶的强抑制剂）

Author(s): HARPER JW, ADAMI GR, WEI N, KEYOMARSI K, ELLEDGE SJ

Source: CELL 75 (4): 805-816 NOV 19 1993

SCI被引4037次，

这种题名是国外《如何撰写和发表科技论文》著作（Day R A. How to Write and Publish a Scientific Paper. 5th ed. The Oryx Press,1998. 15-21)所反对的“陈述性题名（assertive-sentence title)”，但也有编辑认为这是“信息性题名（informative title)”。如果将其中的is 改为as，就不如原题名显得有力，这种选择由作者和期刊的编辑来决定。

该文的眉题为“Cip1 is an inhibitor of G1 cyclin-dependent kinases “，以简单陈述句的形式直接地表达了作者的结论。

7 如何选择投稿刊物？

选择投稿期刊

选择拟投稿的期刊时需要综合考虑的因素主要有：

（1）稿件的主题是否适合于期刊所规定的范围

为确认哪些期刊能够发表自己的论文，作者首先应在**SCI、Scopus数据库进行检索分析**；其次，要认真阅读准备投稿期刊的作者指南，尤其要注意其中有关刊载论文范围的说明，还要仔细阅读最近几期拟投稿期刊的目录和相关论文，以确认是否与自己的稿件的内容相适应。

由于不同学科期刊的影响因子存在很大的差异，因此，选择投稿的期刊应注意避免过于看重期刊的影响因子。有时尽管期刊的影响因子很高，作者所投稿件的内容也非常优秀，但因为期刊与稿件的主题不适合，从而使得稿件难以得到录用和发表。

（2）期刊的读者群和显示度如何

谁阅读这份期刊？作者需要考虑将论文发表在最合适的期刊中。

（3）期刊的学术质量和影响力如何，录用率是否适当

利用JCR检索该期刊的总被引频次和影响因子来了解期刊的学术影响力。即期刊的总被引频次和影响因子越高，则表明期刊被读者阅读和使用的可能性越大。进而可推断该期刊的潜在的学术影响力也越大。

选择投稿期刊

要判断期刊对来稿的录用率和倾向性。在不能确定拟投稿期刊在稿件录用是否具有的倾向性时，可以在SCI数据库检索分析统计该期刊中论文作者的国家来源，帮助作者选择确定投稿期刊。

（4）期刊的编辑技术和印刷质量如何

稿件自被接受至发表的时间在选择期刊时也需要考虑。根据拟投稿的期刊论文的收稿日期（Submitted date）和接受日期（Accepted date）及期刊的出版日期来推测。

（5）期刊是否收发表版面费

期刊是否收版面费和彩版制作费、审稿费和抽印本制作费

检索结果

Publication Name=(journal of Biotechnology)
入库时间=所有年份. 数据库=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, IC, CCR-EXPANDED.

检索结果: **5,239**

精炼检索结果

结果内检索

检索

学科类别 精炼

- BIOTECHNOLOGY & APPLIED MICROBIOLOGY (5,239)

文献类型 精炼

- ARTICLE (3,299)
- MEETING ABSTRACT (1,129)
- PROCEEDINGS PAPER (457)
- REVIEW (168)
- EDITORIAL MATERIAL (80)

更多选项/分类...

作者

来源出版物

出版年

会议标题

机构

语种

1. Title: Optimization of the expression of hepatitis B virus e gene in Pichia pastoris and immunological characterization of the product
Author(s): Li ZX, Hong GQ, Wu ZH, et al.
Source: **JOURNAL OF BIOTECHNOLOGY** Volume: **138** Issue: **1-2** Pages: **1-8** Published: **NOV 6 2008**
Times Cited: **0**
全文

2. Title: Expressed sequence tag analysis of marine fungus Schizochytrium producing docosahexaenoic acid
Author(s): Huang JZ, Jiang XZ, Zhang XW, et al.
Source: **JOURNAL OF BIOTECHNOLOGY** Volume: **138** Issue: **1-2** Pages: **9-16** Published: **NOV 6 2008**
Times Cited: **0**
全文

3. Title: A potent reporter applicable to the monitoring of caspase-3-dependent proteolytic cleavage
Author(s): Park K, Kang HJ, Ahn J, et al.
Source: **JOURNAL OF BIOTECHNOLOGY** Volume: **138** Issue: **1-2** Pages: **17-23** Published: **NOV 6 2008**
Times Cited: **0**
全文

4. Title: Attachment and growth of human embryonic stem cells on microcarriers
Author(s): Phillips BW, Horne R, Lay TS, et al.
Source: **JOURNAL OF BIOTECHNOLOGY** Volume: **138** Issue: **1-2** Pages: **24-32** Published: **NOV 6 2008**
Times Cited: **0**
全文

5. Title: Synthesis of novel fructooligosaccharides by substrate and enzyme engineering

3,239 records. Publication Name=(Journal of Biotechnology)

根据此字段排列记录:	分析：	设置显示 选项:	排序方式:
Country/Territory 文献类型 机构名称 语种	最多 500 条记录。	显示前 10 条结果。 最少记录数 (阈值): 2	记录数 已选字段

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请使用以下复选框查看相应记录。您可以查看已选择的记录，也可以排除这些记录(查看其他记录)。
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语种
出版年
来源出版物

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结束语

一篇学术论文的产生，要经历学术思想的形成，实验，数据分析，论文写作，投稿，修改，校对，发表这样一个漫长的过程。往往从做实验到论文发表出来需要2年甚至更长的时间。唯其艰难，所以才有乐趣。

在研究生期间发表高水平的学术论文，并不仅仅是一种学术要求，更多的是一种自我挑战。若干年后，这种经历一定会成为你们记忆中宝贵的财富。

Thanks !