THE ETHICS OF SCIENTIFIC WRITING: HOW TO WRITE AND HOW NOT TO WRITE A PAPER

Gary Christian
Department of Chemistry
University of Washington
Seattle, WA 98195-1700
christian@chem.washington.edu

University of Washington
Biological Futures in a Globalization World colloquium series
May 7, 2012

Publications

- Spreading of knowledge : oral & written communications
- Evaluation of a scientist
- Promotion of a scientist : scientific achievements

Publish or Perish ?

The Ethics of Scientific Writing: The Good and the Bad

Ethics in publication is of paramount importance, and has become more of an issue for editors in recent years, particularly with the advent of the electronic age.

Plagiarism ?

Use of others' published and unpublished ideas or words (or other intellectual property) without attribution or permission, and presenting them as new and original rather than derived from an existing source.

Self-plagiarism refers to the practice of an author using portions of his or her previous writings on the same topic in another article, without specifically quoting or citing the self-plagiarized material.

Conflicts of Interest (Author)

- Conflicts may be financial, academic, commercial, political or personal.

Financial interests may include employment, research funding (received or pending), stock or share ownership, patents, payment for lectures or travel, consultancies, non financial support, or any fiduciary interest in a company.

- Authors should declare all such interests (or their absence) in writing upon submission

Volume 74 No. 4 15 January 2008 ISSN 0039-9140

ELSEVIER

How to structure a paper to tell your story

Some do's and don't's
Take advantage of peer review

Self-plagiarism
Duplication
Plagiarism
Fabrication
Fraud
Reviewer responsibility

TALANTA

The International Journal of Pure and Applied Analytical Chemistry

Talanta 47 (1998) 1

Editorial

Aims and scope

The editors are very pleased to announce that *Talanta* has been experiencing and increase in the number of papers submitted to the journal. This steady increase in submissions will require the journal to become more strict in its editorial policy and to reject papers that do not closely fit the journal's aims and scope. To this effect, authors are encouraged to carefully read the aims and scope of the journal, and to consider the following criteria before submitting a paper to Talanta.

Talanta provides a forum for fundamental studies and original research dealing with all branches of pure and applied analytical chemistry.

Classical analytical techniques such as volumetric titrations, UV-visible spectrophotometry (including derivative spectrophotometry), voltammetric techniques, and so forth, are considered as routine analytical methods, and manuscripts dealing with these methods should be submitted for publication only if substantial improvement over existing official or standard procedures is clearly demonstrated. New reagents should demonstrate clear advantages, and their presentation should be comprehensive, rather than generating a series of similar papers.

Solvent extraction methods are well established, and new methods should demonstrate improvements in waste generation, non-hazardous material substitutes, and ease of use (automation).

Application of an original method to real matrices is encouraged, provided that it is properly validated following recommendations of official institutions. The developed method should especially comprise information on selectivity, sensitivity, detection limits, accuracy, reliability and speciation capabilities (e.g., in the case of trace metal analysis). Proper statistical treatment of the data should be provided.

Application of classical analytical approaches such as polarography, voltammetry (pulsed), UV-visible spectrophotometry (and derivative), and fluorimetry to relatively simple matrices having no major interference, such as drug formulations or reconstituted samples, are discouraged unless considerable improvements over other methods in the literature (time saving, accuracy, precision, cleaner chemistry, automation) are highlighted.

Papers dealing with analytical data such as stability constants, pK_a values, etc. should be published in more specific journals, unless novel analytical methodology is demonstrated, or important analytical data are provided which could be useful in the development of analytical procedures.

Gary D. Christian
Jean-Michel Kauffmann
Editors-in-Chief
April, 1998


J. harris
"IF THAT'S THE WAY HE FEELS ABOUT CHEMISTRY, THERE'S NO HARM DONE."
WWW.SCIENCECARTOONSPLUS.COM

Abstract

- Be brief and to the point
- Give principle of the method
- Include a summary of important data/results
  - Figures of merit
  - range of measurement
  - detection limit
  - precision
  - samples analyzed

This is NOT an introduction to justify the work
Just a summary of your study

Introduction

- The first sentence is the hardest to write
- Tell a story
- Why is this work important?
- What problem is being addressed?
- What has been done in the past?
- Give relevant references
- How does this advance the state-of-the art?
- Don’t say work of prior authors is no good.
- What have you done (what are you reporting?)

Experimental

Provide enough information for someone else to repeat your work:

Chemicals
Instrumentation
Procedures

Cite appropriate references for prior details

Results and Discussion

- This is the meat of your report
- Be succinct and clear
- Give the basis for your method
  - often nothing is said why a new reagent was selected or studied, although it works
  - why did you think it would work?
- Organize by topics
- Use tables and figures to summarize or illustrate results and conclusions

Figures

- A picture is as good as a thousand words
- Use straight lines sparingly
- Least squares lines, and r^2 values
- Don't use too many figures
- Combine info in one figure when appropriate
  - -may make comparisons easier

Tables

- Don’t put in too much data
- Only that needed to repeat the experiment and to verify/report results
- Significant figures!
- Statistics - standard deviation, t-test

Conclusions

Don’t just repeat abstract

Often not needed

Editors rely on reviewers to provide expert advice.

Most of you will review or have reviewed papers.

While you may say I would never engage in unethical behavior, others do. And it is easy to slip up yourself on self plagiarism. I will give an example of a distinguished scientist.

In this digital age, it is easy for unethical or lazy authors to copy other works, of theirs or of others.

Editors ask reviewers to check for prior similar work.

Some do and some don’t.

Talanta instructions to reviewer:

In order to assure the novelty of the work, I would appreciate, if readily done, that you check the author's prior related publications, besides the usual evaluation with respect to the work of others. Databases such as SciFinder Scholar, ScienceDirect, Scopus or Scirus (a free search engine), could aid you in this search.

A shallow review is usually not much help to the editor.

I will give examples where reviewers have been key in keeping out marginal or duplicative manuscripts.

And others where they have not.

Some examples

Give the rationale for your work

Don’t ignore that of others

Don’t ignore your own

Organic Process R&D editorial (C&ENews, Feb 24, 2003, p. 31):

Authors deliberately don't a cite competitor's work

Hope reviewers don't find out is competition

May also neglect to mention own work.
Only one reason: the work is similar to a previous publication.

This is self-plagiarism!

__X__ Reject

Comments:

…It is written in a straightforward way, but the shortcomings of the paper lead to a clear recommendation of rejection. It is not clear the justification of the rationale for the work. Why are more extraction methods needed for the analysis of these substances in tissues? What technical problems or issues does this research paper address?

The authors have disregarded the extensive research work spent on the extraction of the actual compounds from tissues that have been carried out during the recent decades….

Don’t repeat your own work

Comments on manuscript " 8-hydroxyquinoline anchored to silica gel via new moderate size linker: synthesis and application…..(S02355)" by

General comments:

Preconcentration is subject of many researches in analytical chemistry and 8-hydroxyquinoline is frequently used in analytical chemistry either for liquid-liquid or solid-phase extraction. This manuscript described a new synthetic pathway and characterized 8-hydroxyquinoline immobilized silica gel with ^{13}CPMAS NMR and DRIFT spectroscopy. In addition, the optimum operating conditions for preconcentration of trace metals in river water were examined in somewhat detail. The manuscript should be published in TALANTA. However, the manuscript should be shortened and a major revision is needed. In addition, the authors published a quite similar paper in xxxx, 374, 554-560. So the significance of this manuscript is weak.

Referees Report

_X__ Reject

The submitted paper focuses on the detection of catechol derivatives using a laccase modified electrode. The work is similar to several other papers from this group. The appears to be hastily put together both from the perspective of how it is written and from the depth of the science. Therefore, because of the lack of novelty and the difficulty the reader has in understanding the manuscript, this referee cannot recommend publication at this time. Some specific comments are:

TAL-D-07-00095
Extractive spectrophotometric determination of tungsten(VI) as it's 6-chloro-3-hydroxy-2-(**2'-thienyl**)-4-oxo-4H-1-benzopyran complex

NOT REFERENCED:
Journal of the Indian Chemical Society 83 (8), pp. 842-845(2006)
A sensitive and selective extractive spectrophotometric determination of tungsten(VI) using **6-chloro**-3-hydroxy-2-(**4′-methoxyphenyl**)-4-oxo-4H-1- benzopyran

Journal of the Indian Chemical Society 83 (7), pp. 728-730 (2006)
3-Hydroxy-2-(4′-methoxyphenyl)-4-oxo-4H-1-benzopyran as an analytical reagent for the spectrophotometric determination of tungsten(VI)

The Bad

Publish and Perish

Don’t Duplicate

Preconcentration with membrane cell and adsorptive polarographic determination of cyanides in air, Analytica Chimica Acta, 382 (1999) 283.

Preconcentration with membrane cell and adsorptive polarographic determination of phenols in air, Talanta, 53 (2000) 517.

Preconcentration with membrane cell and adsorptive polarographic determination of formaldehyde in air, Talanta, 57 (2002) 317. Received 12 Dec. 2001, revised 31 Dec. 2001.

Preconcentration with membrane cell and adsorptive cathodic stripping voltammetric determination of aniline in air, Indian Journal of Chemistry, 41A (2002) 2310. Received 3 Sept., 2001, revised 10 May 2002.

processor. The electrolytic cell has a three-electrode

aniline was obtained. The mixture was diluted to

er(Shandong Instrumental Factory) with an Epson printer and a JM-01 (manual micro-metric screw delivery) hanging mercury drop electrode, controlled by micro-processor, and A PAR Model 273 potentiostat/Galvanostat with a PAR Model 303 static mercury drop electrode, controlled by PAR Model 270 software, were used for pulse polarography, linear scan voltammetry, cyclic voltammetry and other electrochemical measurements. For pulse polarography the instrumental parameters were as follows: accumulation potential, −0.40 V; drop size, medium; pulse amplitude, 50 mV; pulse period, 2 s; equilibrium time, 15 s.

Formaldehyde Paper

3.2. Reagents

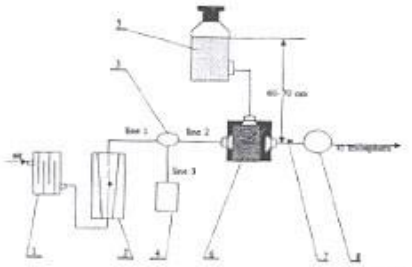
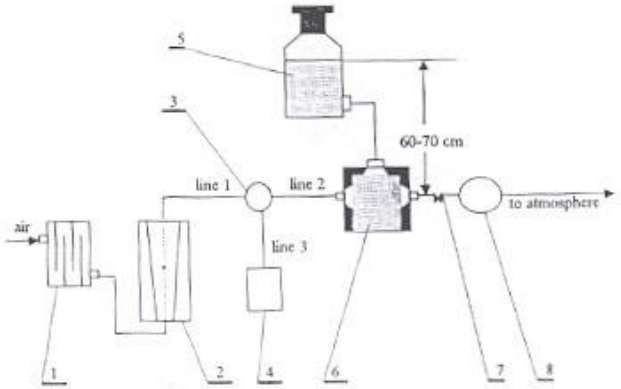


Fig. 2. Scheme of experimental device for absorption of aniline in air: (1) buffer bottle; (2) rotameter; (3) triton valve; (4) samples solution collector; (5) water; (6) membrane cell; (7) air regulating valve; (8) pump.

Formaldehyde paper

<aniline



Aniline paper

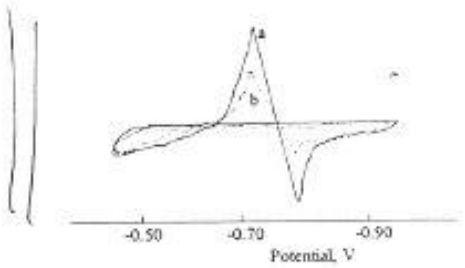


Fig.4—Derivative cyclic voltammograms: 1.0×10^{-5} mol/L aniline, 0.0010 mol/L HCl, 0.0030 mol/L $NaNO_2$, 0.0025 mol/L Na_2SO_3, 0.0060% HCHO, 0.0060% Triton X-100, scan rate of 100 mV/s; (a) First scan; (b) Second and repetitive scans.

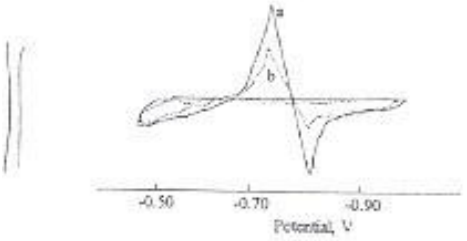


Fig. 5. Derivative cyclic voltammograms: pH 5.7, 1.0×10^{-6} M formaldehyde; 2.0×10^{-3} M DNPH; 0.010 M NaCl; 0.0010% Tween-80; scan rate of 100 mV s^{-1}; (a) First scan; (b) Second and repetitive scans.

Aniline paper

Formaldehyde paper

Talanta

A novel potentiometric diphtheria immunosensor modified colloidal Ag and polyvinyl butyral as matrixes

[redacted]

Chong Qing Key Laboratory of Analytical Chemistry, College of Chemistry and Chemical Engineering, Southwest China Normal University, Chongqing 400715, China

Received 26 February 2004; Revised 11 April 2004; accepted 22 April 2004. Available online 19 June 2004.

SAB

Preparation and application on a kind of immobilization method of anti-diphtheria for potentiometric immunosensor modified colloidal Au and polyvinyl butyral as matrixes

[redacted]

Chong Qing Key Laboratory of Analytical Chemistry, College of Chemistry and Chemical Engineering, Southwest China Normal University, Chongqing 400715, China

Received 25 March 2004; Revised 21 April 2004; accepted 26 April 2004. Available online 15 June 2004.

y

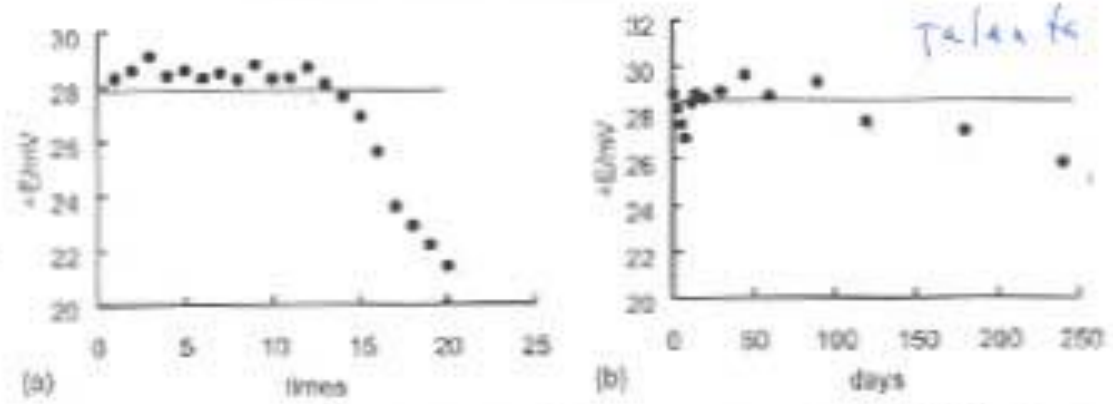


Fig. 7. The reproducibility (a) and life time (b) of the immunosensor to 40 ng mL^{-1} diphtheria antigen.

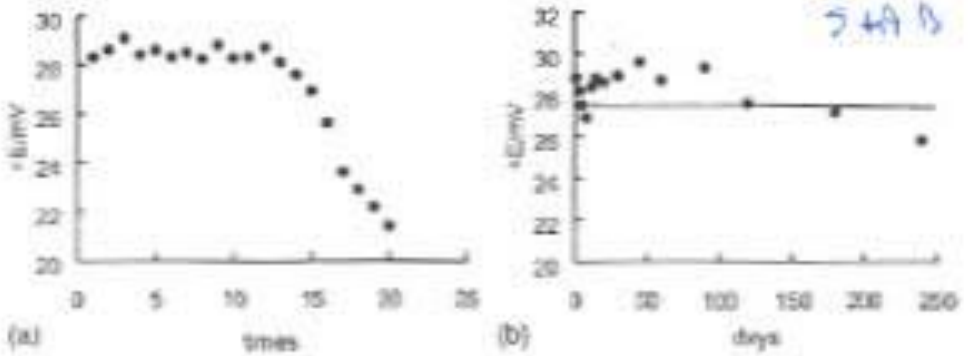


Fig. 9. The reproducibility (a) and life time (b) of the immunosensor to 48.6 ng mL^{-1} diphtheria antigen.

Talanta paper

S&AB paper

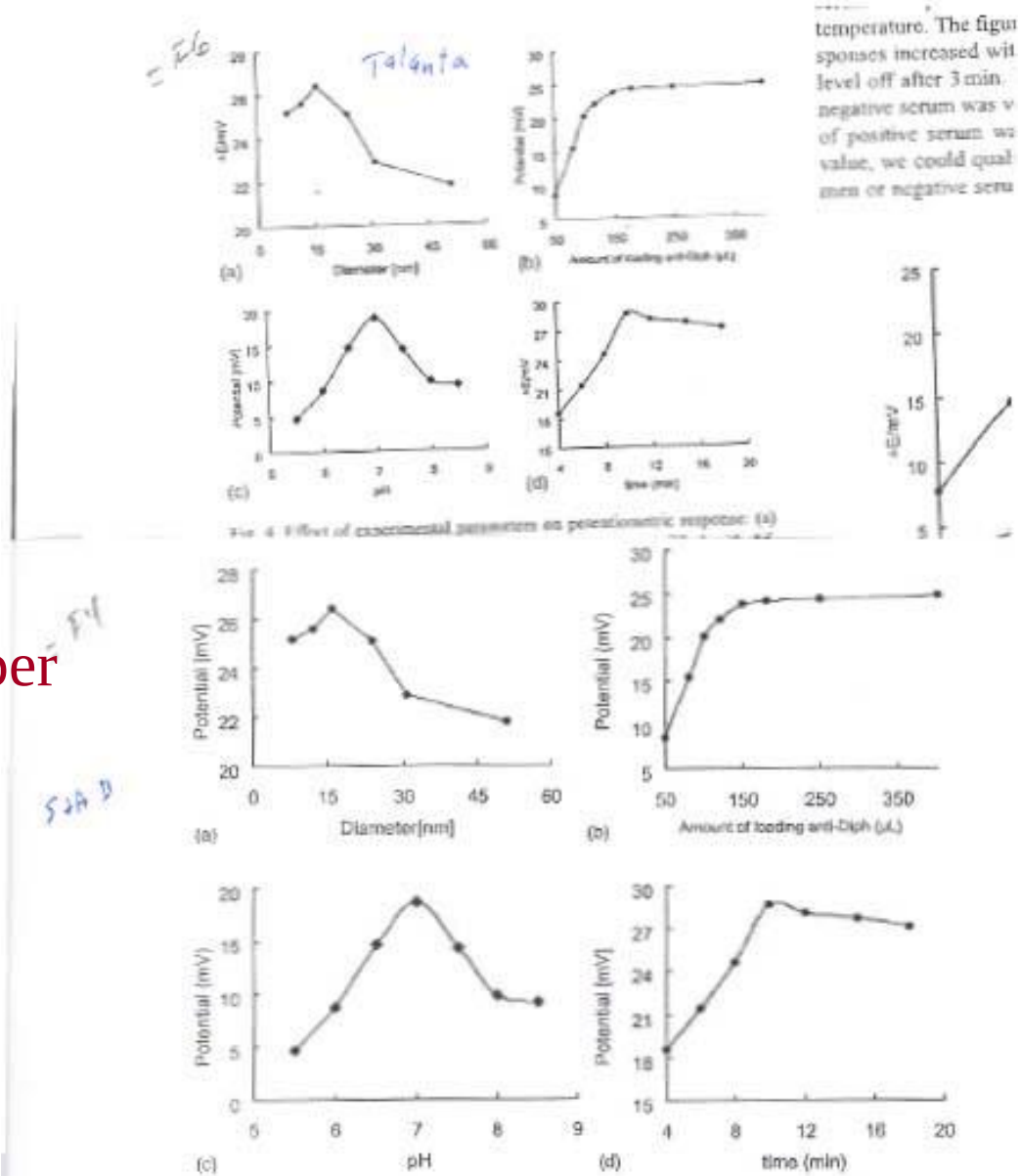


Fig. 6. Effect of experimental parameters on potentiometric response: (a) steady-state potentiometric response of immunosensor ma
size of Au nanoparticles in the presence of 48 ng mL^{-1} Diph, (b) effect of the amount of immobilized anti-Diph loading within
Diph, (c) effect of pH on the potentiometric response of the immunosens

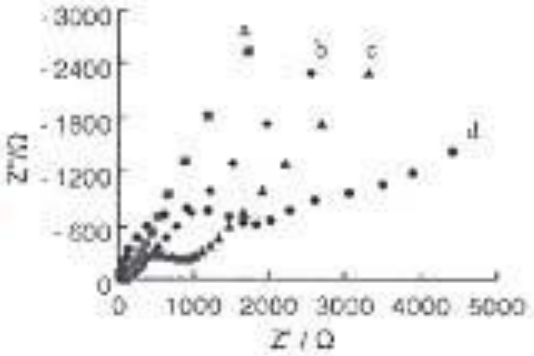


Fig. 2. The electrochemical impedance spectroscopy (EIS) of the different electrodes: (a) a bare platinum electrode, (b) Ag-modified platinum electrode, (c) Ag-PVB-modified platinum electrode, and (d) anti-Diph-Ag-PVB-modified platinum electrode. Supporting electrolyte, 10 mM PBS (pH 7.0) + 0.1 M KCl + 2.5 mM $Fe(CN)_6^{4-}/Fe(CN)_6^{3-}$ solution. Z vs. Z' at 220 mV vs. SCE.

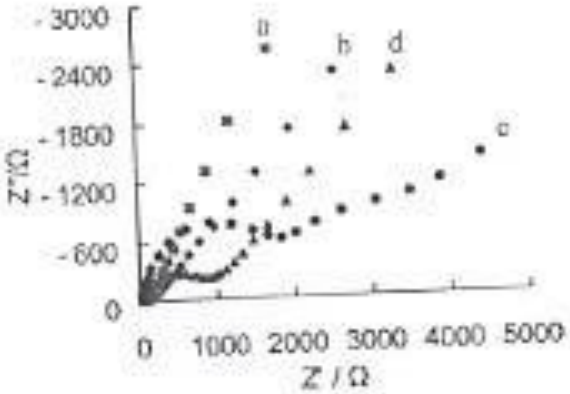


Fig. 4. The electrochemical impedance spectroscopy of the different electrodes: (a) a bare platinum electrode, (b) Au-modified platinum electrode, (c) anti-Diph-Au-PVB-modified platinum electrode and (d) Au-PVB-modified platinum electrode. Supporting electrolyte, 10 mM PBS (pH 7.0) + 0.1 M KCl + 2.5 mM $Fe(CN)_6^{4-/3-}$ solution. Z vs. Z' at 220 mV vs. SCE.

TAL-D-06-01470
“Kinetic - Photometric Determination of Silver (I) based on its Catalytic Effect on Ligand Exchange Reaction between Potassium Ferrocyanide and 2-hydroxy-4-Methoxybenzophenone thiosemicarbazone”

XXX 48, 733 (2003)
“Kinetic Photometric Determination of Silver(I) Based on its Catalytic Effect on Reaction Between Potassium Ferrocyanide and 2-Hydroxy-4-Methoxybenzophenone Thiosemicarbazone”

Don’t Self Plagiarize

C&ENews
April 30, 2012 | Latest News**Breslow Paper In *JACS* Questioned**
Critics cite similarities between Perspective and two previously published papers

The *Journal of the American Chemical Society* and ACS are investigating allegations of self-plagiarism leveled against Columbia University chemistry professor Ronald Breslow. … At this time, the paper has been removed from the *JACS* website.

Breslow is a titan in the chemistry enterprise and a major figure at ACS. He served as the society's president in 1996 and was the recipient of the society's highest award, the Priestley Medal, in 1999. He is a member of the National Academy of Sciences and a recipient of the National Medal of Science (1991).

The paper in question is a *JACS* Perspective entitled “Evidence for the Likely Origin of Homochirality in Amino Acids, Sugars, and Nucleosides on Prebiotic Earth.”

Breslow had published on the same subject in *Tetrahedron Letters* in 2010.

… was identical in large part to a review Breslow had published in 2011 in the *Israel Journal of Chemistry.*

UPDATE: On April 28 via e-mail, Breslow responded to C&EN's request for comment:

"The Perspective was requested by the editor of *JACS,* and I decided to accept the invitation since I thought the work definitely deserved *JACS* publication," Breslow wrote. "However, I had written two reviews before in other journals, so I was concerned to avoid self-plagiarism. I knew that figures should not be duplicated, so I redid them and, of course, used a new title and introduction, and a new sequence of presentation, but then I am afraid I fell in love with my own words previously used—after all it was the same material being discussed—and did not make enough effort to change them.

….

repetition of so much was certainly an error, so I understand why the Perspective needs to be withdrawn."

I think there is no originality in this work. My opinion is that the authors often change journals to increase the number of their papers. I compare this report to some papers found in Science Direct: ……..

……..There are many similarities with this manuscript. The titles and keywords are mixed to have the same objective. Different paragraphs are not original…..

Don’t send the same work to two different journals!!

Dear Paul,

I feel I have to ask you for advice in regard to the paper you recently sent me to referee it.

Recently I received by chance two paper for refereeing which are from the same authors and on a similar topic:

Manuscript No. PH588, submitted to Anal.Chim.Acta:
A miniaturised fluorescence detector using a light emitting diode as excitation source and a windowless flow cell
by xxx

and

MS. No. S02221, submitted to Talanta:
Light-emitting-diode-induced fluorescence detector for capillary electrophoresis using optical fibre with spherical end
by xxx

…If I refereed each paper separately WITHOUT the knowledge of the other, my recommendations would be most likely for a minor and a major change respectively.

Additional Editor's comments:

I have received one review on this paper which recommends rejection (review attached). Whilst awaiting the second review I noticed a paper by the same authors which had recently been published:

Determination of trace lead, cadmium and mercury by on-line column enrichment followed by RP-HPLC as metal-tetra-(4-bromophenyl)-porphyrin chelates. xxx Talanta xx (200x) xxx-xxx

I have compared the Talanta paper with the manuscript submitted to Analytica Chimica Acta and I was astounded to see that they are virtually identical. It therefore appears that the authors have submitted the same work to two journals and were prepared to see it published in both. If true, this is an outrageous and totally unacceptable action.

The International Journal Of Pure & Applied Analytical Chemistry

TALANTA

Professor Gary D. Christian, Joint Editor-in-Chief
Professor Robert E. Synovec, Associate Editor
University of Washington
Department of Chemistry
Box 351700
Seattle, WA 98195-1700 USA
Telephone (Office (206) 543-2906
FAX (206) 685-3478
e-mail: christia@chem.washington.edu
synovec@chem.washington.edu

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December 7, 1995

Prof. W. Fresenius
Fresenius' Journal of Analytical Chemistry
Institut Fresenius
Postfach 12 61
65220 Taunusstein, Germany

Dear Prof. Fresenius:

Enclosed is my initial review of the paper by Huang et al. entitled

> "The Determination of Trace Tetracycline by Spectrofluorimetry of Eu-Tetracycline-Acetylacetone-Cetyltrimethyl Ammonium Bromide"

My assessment is that improvement in sensitivity over conventional methods is achieved as a result of adding the surfactant, but some details are lacking.

However, at the time I received the manuscript for review, I received a very similar manuscript from the same authors, submitted for publication in Talanta, entitled

> "The Determination of Trace Tetracycline by Fluorescence Spectrophotometry of Eu-Tetracycline-Cetyltrimethyl Ammonium Bromide"

A copy is enclosed for your information. The only change in the one submitted to you is the addition of the reagent acetylacetone. The figures are virtually identical, with only an incremental increase in the sensitivity; most of the increase is due to the CTAB surfactant. The authors obviously conducted these studies in parallel with the idea of generating two papers. They should have presented only the completed study with the acetylacetone.

Because of the manner in which they have presented these two manuscripts, I am recommending that neither be published. While we were about to submit the Talanta manuscript for review, I decided not to proceed after receiving the Fresenius' Z. Anal. Chem. manuscript for review, and am returning it to the authors. I will be interested in learning of your disposition of the manuscript.

Please let me know if I can assist any further in this matter.

Sincerely,
Gary Christian
Gary D. Christian
Professor

Encl: Manuscript and author letter

Dear Dr. Christian,
In the course of seeking reviewers, a reviewer reported to us that the following manuscript may be under consideration for Talanta:
"Development and validation of ultrafast UPLC and monolithic HPLC methods for the determination of principal flavor compounds in Vanilla planifolia: A comparative study." Authors: xxx
Editor, J. Agric. Food Chem., Feb. 24, 2009

Yes, we have this under review.
Reviewer discovered parts plagiarized from another author.

Don’t plagiarize

…the experimental designs seem to have been largely taken from a paper that is not cited (Garris et al., 2004, J Neurosci Methods, 140:103-114). ***Even worse, it appears that entire text was simply lifted from the published work, e.g.,:***

*"**Although** too large for attaching to a rat, the size of the remote unit expedited circuit construction, modification and testing" (Garris)*

"**As the unit** was too large for attaching to a rat, the size of the remote unit expedited circuit construction, modification and testing" (submitted manuscript)

*"A 14.7456MHz crystal enables an ADC rate of 100 KS/s and 460 Kbaud serial communication with the third component of the **remote** unit, telemetry." (Garris)*

"14.7456 MHz crystal enables an ADC rate of 100 KS/s and 460 Kbaud serial communications with the third component of the **moving** unit, telemetry" (submitted manuscript)

Available online at www.sciencedirect.com
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Talanta 63 (2004) 303–307
Talanta
www.elsevier.com/locate/talanta

Coated graphite-epoxy ion-selective electrode for the determination of chromium(III) in oxalic medium

S. Khalil [a,*], A.A. Wassel [b], F.F. Belal [c]

[a] Department of Chemistry, Faculty of Science, Fayoum, Cairo University, Fayoum Branch, 63514-Fayoum, Egypt, Saudi Arabia
[b] National Organization For Drug Control & Research, Giza, P.O. Box 29, Cairo, Egypt, Saudi Arabia
[c] Faculty of Pharmacy, King Saud Univerisity, Riyadh, Saudi Arabia

Received 25 June 2003; received in revised form 7 October 2003; accepted 31 October 2003

ANALYTICAL LETTERS, 30(3), 417–427 (1997)

COATED GRAPHITE-EPOXY ION-SELECTIVE ELECTRODE FOR THE DETERMINATION OF IRON(III) IN OXALIC MEDIUM

KEY WORDS: iron(III) ion-selective electrode, coated graphite-epoxy conductor electrode, potentiometry, PVC.

Marcos Fernando de Souza Teixeira, Alexandre Zambon Pinto and Orlando Fatibello-Filho*

Laboratório de Química Analítica, Departamento de Química, Centro de Ciências Exatas e de Tecnologia, Universidade Federal de São Carlos, Caixa Postal 676-13560-970-São Carlos-SP, Brazil.

Talanta

Abstract

A coated graphite-epoxy chromium(III) ion-selective electrode, based on the ion-pair between $[Cr(oxalate)_3]^{3-}$ anion and tricaprylmethylammonium cation (Aliquat 336) in a poly(vinylchloride) (PVC) matrix is constructed. A thin membrane film of this ion-pair, dibutylphthalate (DBP) in PVC was deposited directly onto a Perspex® tube containing a graphite-epoxy conductor substrate attached to the end of a glass tube. The effect of membrane composition (ion-pair, DBP and PVC), oxalate concentration, pH and some cations and anions upon the electrode response is investigated. The electrode shows a linear anionic response to E vs. log $[Cr^{3+}]$ in the chromium(III) concentration range from 2.9×10^{-6} to 10^{-2} mol l^{-1}, and a slope of -18.7 ± 0.5 mV dec^{-1}, at pH working range of 2–8 and 0.3 mol l^{-1} oxalate concentration. Variation in the potential of about ±2 mV was observed during a working day of 7–8 h. The response time was less than 5 s and the life time of this electrode was superior to 1 year (over 1500 determinations by each polymeric membrane), with a practical detection limit of 2.1×10^{-6} mol l^{-1}. Application of this electrode for chromium(III) determination in some food materials and various types of plants is described.

Keywords: Chromium(III) ion-selective electrode; Coated graphite-epoxy conductor electrode; Potentiometry; PVC

Analytical Letters

ABSTRACT

A coated graphite-epoxy iron(III) ion-selective electrode, based on the ion-pair between $[Fe(oxalate)_3]^{3-}$ anion and tricaprylylmethylammonium cation (Aliquat 336) in a poly(vinylchloride) (PVC) matrix is constructed. A thin membrane film of this ion-pair , dibutylphthalate (DBPh) in PVC was deposited directly onto a Perspex^R tube containing a graphite-epoxy conductor substrate attached to the end of a glass tube. The effect of membrane composition (ion pair, DBPh and PVC), oxalate concentration, pH and some cations and anions upon the electrode response is investigated. The electrode shows a linear anionic response to E vs. log$[Fe^{3+}]$ in

Talanta

1. Introduction

Since the development by Ross [1] of the first liquid membrane electrode sensitive to the calcium cation, much progress has been made. Moody et al. [2,3] replaced the thick layer of liquid exchanger material supported by a dialysis membrane (cellulose acetate) by a thin polymeric film of poly(vinylchloride) (PVC), thus significantly decreasing the high resistance and relatively long response of that electrode. Several electrodes were constructed for various cations, anions and organic compounds.

Analytical Letters

INTRODUCTION

Since the development by Ross[1] of the first liquid membrane electrode sensitive to the calcium cation, much progress has been made. Moody and Thomas[2,3] replaced the thick layer of liquid exchanger material supported by a dialysis membrane (cellulose acetate) by a thin polymeric film of poly(vinylchloride) (PVC), thus significantly decreasing the high resistance and relatively long response of that electrode. Several electrodes were constructed for various cations, anions and organic compounds.

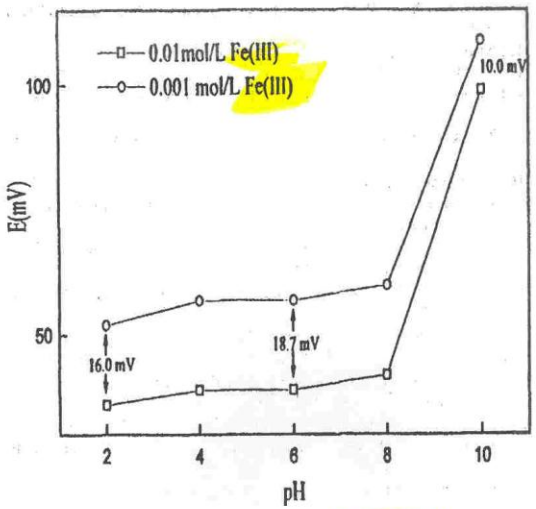

Fig. 1. Effect of pH on the response of the chromium(III) ion-selective electrode for chromium(III) concentration of: (○) 1×10^{-3} and (□) 1×10^{-2} mol l^{-1} in 0.3 mol l^{-1} oxalate, at 25.0 °C.

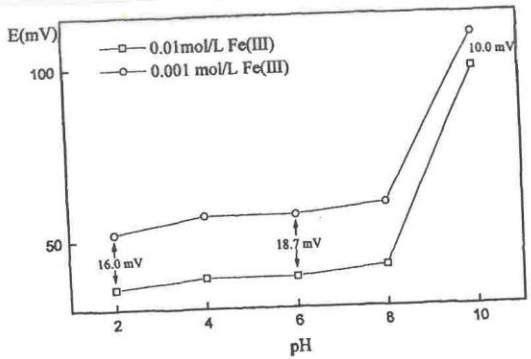

Figure 1: Effect of pH on the response of the iron (III) ion-selective electrode for iron (III) concentration of: ○○○ :$1x10^{-3}$ and □□□ :$1x10^{-2}$ mol/L in 0.3 mol/L oxalate, at 25.0 °C .

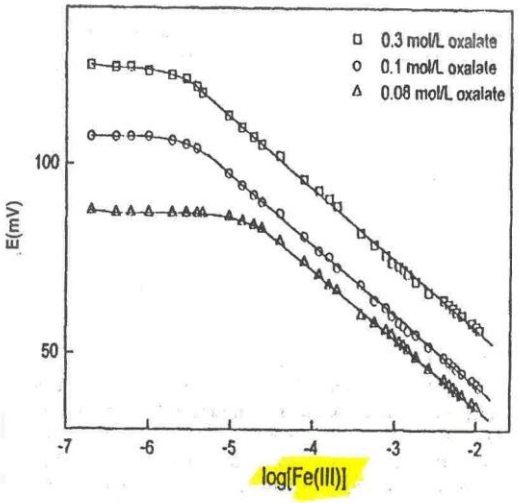

Fig. 2. Effect of oxalate concentration on the calibration curves of the chromium(III) ion selective electrode: (△) 0.08, (○) 0.1 and (□) 0.3 mol l^{-1}, at pH 6.0 and 25 °C.

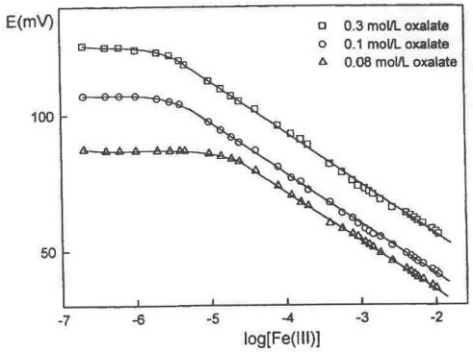

Figure 2: Effect of oxalate concentration on the calibration curves of the ir
(III) ion selective electrode: ΔΔΔ:0.08 , ○○○ :0.1 and □□□ :(
mol/L, at pH 6.0 and 25 °C.

Talanta

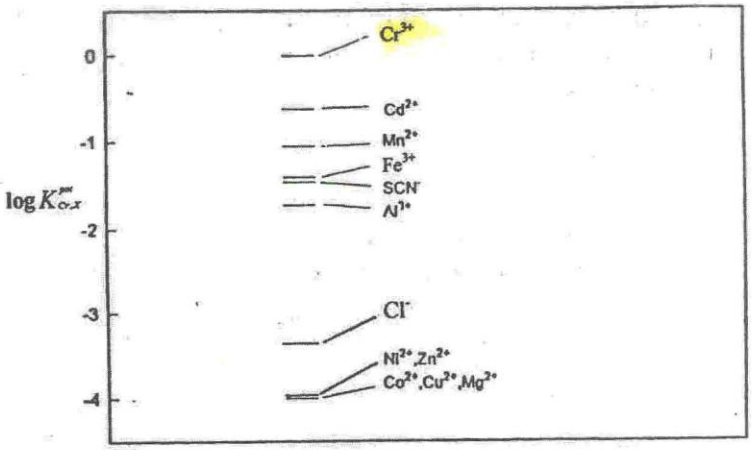

Fig. 3. Potentiometric selectivity coefficient values for chromium(III) ion-selective electrode ($\log K^{pot}_{Cr,X}$) in 0.3 mol l^{-1} oxalate solution, determined by separate methods[2] at 1.0×10^{-4} mol l^{-1} concentration of interfering ions.

Analytical Letters

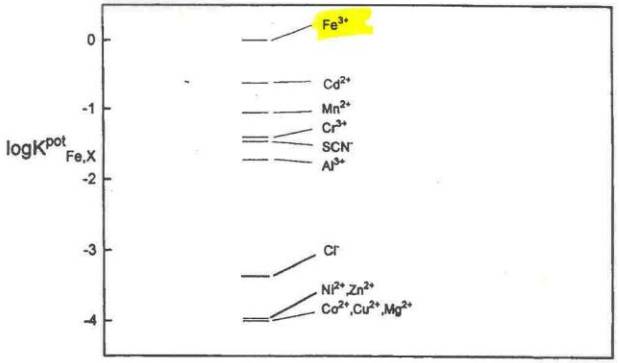

Figure 3: Potentiometric selectivity coefficient values for iron (III) ion-selective electrode ($\log K_{Fe,X}$) in 0.3 mol/L oxalate solution, determined by separate methods[2] at 1.0×10^{-4} mol/L concentration of interfering ions.

Talanta

Table 1
Determination of chromium in some food materials using chromium(III) electrode compared with atomic absorption spectrophotometric method

Sample	Chromium ($\mu g\,ml^{-1}$)		Relative errors
	AAS	Proposed sensor	
Black pepper	53.8	54.8	+1.9
Cocoa powder	53.1	52.3	−1.5
Turmeric powder	53.6	52.4	−2.2
x	53.6	53.2	
S^2	0.1	1.9	

$F = S_B^2/S_A^2 = 1.9/0.1 = 19$, $F_{0.01/3.3} = 29.5$ (critical value).

Analytical Letters

Table 1. Determination of iron in biotônico (Brazilian tonic formula) using iron(III) electrode compared with atomic absorption spectrophotometric method.

Replicates	μg/ml of iron		Relative Errors
	spectrophotometry	potentiometry	
1	53.8	54.8	+1.9
2	53.1	52.3	-1.5
3	53.6	52.4	-2.2
x	53.6	53.2	
S^2	0.1	1.9	

$F = S^2_B / S^2_A = 1.9 / 0.1 = 19$
$F_{0,01/3,3} = 29.5$ (critical value)

Available online at www.sciencedirect.com
SCIENCE DIRECT®
Talanta 63 (2004) 303–307
Talanta
www.elsevier.com/locate/talanta

Coated graphite-epoxy ion-selective electrode for the determination of chromium(III) in oxalic medium

S. Khalil [a,*], A.A. Wassel [b], F.F. Belal [c]

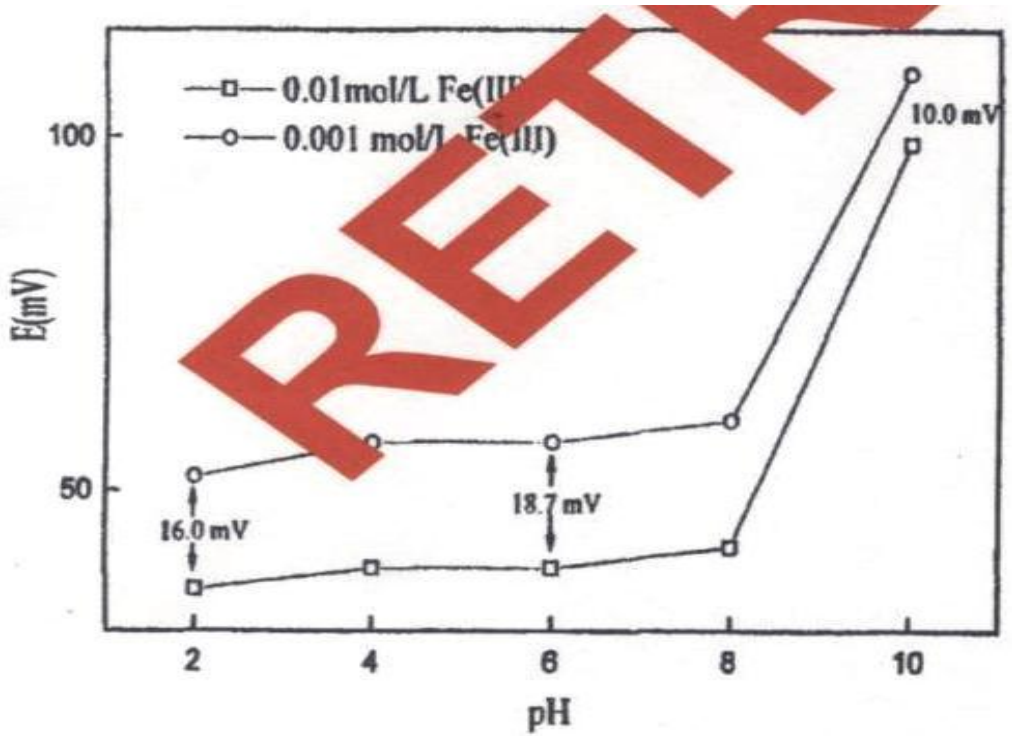

Fig. 1. Effect of pH on the response of the chromium(III) ion-selective electrode for chromium(III) concentration of: (○) 1×10^{-3} and (□) 1×10^{-2} mol l^{-1} in 0.3 mol l^{-1} oxalate, at 25.0 °C.

ScienceDirect

doi:10.1016/j.sigpro.2005.07.019 Cite or Link Using DOI

RETRACTED: Matching pursuit-based approach fo

[redacted]

Available online 24 August 2005.

This article has been retracted at the request of the Editor-in-Chief and Publi

http://www.elsevier.com/locate/withdrawalpolicy.

Reason: This article is virtually identical to the previously published article: "
algorithm for SNR improvement in ultrasonic NDT" , *Independent Nondestr*
International volume 38 (2005) 453 – 458 authored by N [redacted]

RETRACTED

the echoes issuing from the flaws to be detected. Therefore, it cannot be cancelled by classical time averaging or matched band-pass filtering techniques.

Many signal processing techniques have been utilized for signal-to-noise ratio (SNR) improvement in ultrasonic NDT of highly scattering materials. The most popular one is the split spectrum processing (SSP) [1–3], because it makes possible real-time ultrasonic test for industrial applications, providing quite good results. Alternatively to SSP, wavelet transform (WT) based denoising/detection methods have been proposed during recent years [4–8], yielding usually to higher improvements of SNR at the expense of an increase in complexity. Adaptive time-frequency analysis by basis pursuit (BP) [9,10] is a recent technique for decomposing a signal into an optimal superposition of elements in an over-complete waveform dictionary. This technique and some other related techniques have been successfully applied to denoising ultrasonic signals contaminated with grain noise in highly scattering materials [11,12], as an alternative to the WT technique, the computational cost [redacted] BP algorithm being the main drawback.

In this paper, we propose a [redacted] pursuit-based signal processing [redacted] proving SNR in ultrasonic NDT [redacted] highly scattering materials, such [redacted] and composites. Matching pursuit is used instead of BP to reduce the complexity. Despite its iterative nature, the method is fast enough to be real-time implemented. The performance of the proposed method has been evaluated [redacted] both computer simulation and experimental results, [redacted] when the input SNR (INRdB) is lower than 0dB (the level of echoes [redacted] microstructures is above the level of the echoes).

2. Matching pursuit

Matching pursuit was introduced by Mallat and Zhang [13]. Let us suppose an approximation of the ultrasonic backscattered signals $x[n]$ as a linear expansion in terms of functions $g_i[n]$ chosen from an over-complete dictionary. Let $\mathbf{H}$ be a Hilbert space. We define the over-complete dictionary as a family $D = \{g_i,\ i = 0, 1, \ldots, L\}$ of vectors in $\mathbf{H}$, such as $\|g_i\| = 1$.

The problem of choosing functions $g_i[n]$ that best approximate the analysed signal $x[n]$ is computationally very complex. Matching pursuit is an iterative algorithm that offers sub-optimal solutions for decomposing [redacted] terms of expansion functions chosen from a dictionary, where l^1 norm is used as the approximation metric because of its mathematical convenience. When a well-designed dictionary is used in matching pursuit, the non-linear [redacted] of the algorithm leads to compact [redacted] models.

In each [redacted] of the matching procedure, vector $g_i[n]$ which [redacted] the largest inner product with the analysed signal is chosen. The contribution of this vector is then subtracted from the signal and the process is repeated on the residual. At the mth iteration the residue is

$$r^m[n] = \begin{cases} x[n], & m = 0, \\ r^{m-1}[n] + a_{g_{m0}(k_{m0})}[n], & m \neq 0, \end{cases} \quad (1)$$

where $a_{g_{m0}}$ is the weight associated to optimum atom $g_{m0}[n]$ at the mth iteration.

The weight a_i^m associated to each atom $g_i[n] \in D$ at the mth iteration is introduced to compute all the inner products with the residual $r^m[n]$:

$$a_i^m = \frac{\langle r^m[n], g_i[n]\rangle}{\langle g_i[n], g_i[n]\rangle} = \frac{\langle r^m[n], g_i[n]\rangle}{\|g_i[n]\|^2} = \langle r^m[n], g_i[n]\rangle. \quad (2)$$

The optimum atom $g_{m0}[n]$ (and its weight a_{m0}) at the mth iteration are obtained as follows:

$$g_{m0}[n] = \arg\max_{g_i \in D} |\langle r^{m-1}[n]\rangle|^2 = \arg\max_{g_i \in D} |a_i^m|^2 = \arg\max_{g_i \in D} |a_i^m|. \quad (3)$$

The computation of correlations $\langle r^m[n], g_i[n]\rangle$ for all vectors $g_i[n]$ at each iteration implies a high computational effort, which can be substantially reduced using an updating procedure derived from Eq. (1). The correlation updating procedure [13] is performed as follows:

$$\langle r^{m+1}[n], g_i[n]\rangle = \langle r^m[n], g_i[n]\rangle - a_{m0}\langle g_{m0}[n], g_i[n]\rangle \quad (4)$$

- Retracted articles are *not* removed from "the literature!
  - They are replaced by a Retraction Note and a "Tombstone article"
  - The reason of retraction will always be visible

Signal Processing
Volume 86, Issue 5, May 2006, Pages 962-970

RETRACTED: Oxidative damage of 14-3-3 zeta and gamma isoforms in Alzheimer's disease and cerebral amyloid angiopathy *Neuroscience, ...2007*

This article has been retracted at the request of the editors **and authors.**

Reason: After publication of their paper, the authors increased the number of control cases …. in comparative spots ….. Differences were not significant between Alzheimer's disease (AD) (*n*=6) and age-matched controls (*n*=8)

……

Therefore, the present data do not indicate significant differences between control and AD cases regarding total 14-3-3 and oxidised 14-3-3 levels in total homogenates, and the conclusion made in this article is invalidated.

sciencedirect.com

- 670 articles found as: retracted at the request of the Editor (all journals)
- 13 articles found as: retracted at the request of the Editor (Talanta)

Action against violation

Dear Dr. [redacted],

Very serious allegations of plagiarism have been made against you for publishing without reference, studies by Kaneko at al (see attached). These allegations have been made to the Editors of Analytical Chemistry, Analitica Chimica Acta, Talanta and Chemistry Letters.

Such allegations, if not answered satisfactorily, will result in you being blacklisted by most of the world's major Analytical journals. I believe an answer to these charges is essential.

Sincerely yours,

Prof. G.G. Guilbault,
Executive Editor.

A Massive Case of Fraud:

Pattium Chiranjeevi

Ms. No.: ACA-07-746
Title: On-line Electrochemical Oxidation of As(III) for the determination of total As by Flow Injection-Solid Phase Spectrophotometry

The authors copied more than 95% of the work of Matsuoka et al which was published in December 2006 as a "hot" paper in Analytical Sciences. (Volume 22, pages 1519-1524).

Simply changed chromium to arsenic. The chromium reagent will not react with arsenic.

I received the very next day:

Sir, ….we found one related paper to our research,…
“Spectrophotometic determination of Fenitrothion…..
Talanta, **72**, 106 (2007).
(Submitted September 5, 2006)

…The proposed reaction scheme is scientifically and experimentally not possible.

…author did not reply.

"…spectrophometic detemination of fenitrothion…"
J. Hazardous Materials, in press

Submitted October 8, 2006
Only minor change in purported reagent.

Abstract and all text *identical* to
"Spectrophotometric detemination of fenitrothion…
Talanta, 72 (2007)106, **submitted Sept. 5, 2006**
Tables and figures identical,
only slight changes in numbers in tables.

J. Hazard. Mater. (Oct. 8, 2006) Taken	Talanta (Sept. 5, 2006) Taken
25.70	30.70
50.50	60.50
75.60	90.60
100.30	120.30
125.40	135.40
150.50	150.50

Many other examples of similar duplication of papers by this author, sent to different journals. NONE cross referenced.

Papers submitted to Talanta, 2006:
9 submitted, 7 rejected (3 without review)
2 accepted

Papers submitted to Chemosphere:
6 submitted, 1 accepted 2005
5 rejected without review 2006

10 papers published, Env. Monit. Assess.

Papers accepted by J. Hazardous Mater.
5 published, 8 in press.
Editor received complaint of too many duplicated manuscripts, and wrote to author in Dec. 2006 he is pushing the limit of accepted scientific conduct.

Rejected Talanta paper:
“Cloud point extraction of palladium…”

Resubmitted to J. Hazardous Mater. 3 wks. later,
but with 3 additional authors. Accepted.

70 papers published in three years.

25 different journals

27 coauthors in 15 papers
University allows only 6 students
56 coauthors on all papers
Equipment not available!

Chemical & Engineering News

Science & Technology
February 18, 2008
Volume 86, Number 07
pp. 37-38

A Massive Case Of Fraud

Journal editors are left reeling as publishers move to rid their archives of scientist's falsified research

William G. Schulz

Chiranjeevi, who communicates through a wide variety of e-mail addresses, has not responded to multiple requests for comment by C&EN.

"Chiranjeevi claimed to be using advanced instrumentation not available at the university," the source says. "The chemistry in most of his papers is illogical—the chemistry itself is wrong.

Worse, "he was charging students a fee to award them degrees," the source says.

"He listed as many as 56 coauthors on his papers. There were complaints prior to the investigation, but nobody looked into it very seriously."

He says the university does not seem to have taken disciplinary action against any students who worked under Chiranjeevi's supervision, even though some of them were aware of and participated in the fraud he perpetrated.

"I hated seeing papers from this guy," says Gary D. Christian, who is editor-in-chief of the Elsevier analytical chemistry journal *Talanta*, one of the journals that published Chiranjeevi's research.

Christian, who is professor emeritus of chemistry at the University of Washington, Seattle, says Chiranjeevi's tactic was to flood journals with manuscript submissions in the hopes of wearing down editors who would eventually publish some of his work.

1170-1171 29 FEBRUARY 2008 VOL 319 SCIENCE
www.sciencemag.org

This time it's chemistry's turn. After a series of high-profile scientific misconduct cases in stem cell biology and physics, an Indian chemistry professor has been punished by his university for committing unethical practices involving what appear to be dozens of recent papers, including plagiarizing data in an article submitted last year to an analytical chemistry journal.

In the wake of the investigation, four Elsevier journals have retracted 13 papers written by Pattium Chiranjeevi, a professor of chemistry at Sri Venkateswara University (SVU) in Tirupati, India, and at least one other publication is reviewing pending submissions from Chiranjeevi or published articles he has written.

In an interview with Science, Chiranjeevi said that the charges against him are “baseless and not correct.”

He blames colleagues and journal editors for creating “this nuisance” and says that he plans to take action in an “international court of justice.”

The full scope of the falsified papers may never be known. Although the university has not said how many papers it examined, the summary concludes that "a large number of publications (66) in a short span of time, 2004–2007, without proper equipment, lead to the suspicion about the genuineness of the work."

It cast further doubt on many of them, stating that the majority included co-authors whose involvement raised questions.

RSC Chemistry World

Chemistry's 'colossal' fraud

25 March 2008
Killugudi Jayaraman/ **Tirupati, India**

One of the biggest cases of scientific fraud in chemistry is continuing to send shockwaves across India, as concerns are raised over the senior academics who co-authored a plethora of discredited academic papers with researcher Pattium Chiranjeevi.

… attention has now turned to the researchers that put their names to nearly 45 of the suspect papers, who include the heads of the university's physics, mathematics, geology and environmental sciences departments.

Shocking fraud

University sources allege that Chiranjeevi and his students combed old and obscure journals on the internet for papers to plagiarise. According to one, Chiranjeevi used to start his day by asking his students,

'Well, what have you downloaded today?‘

Hosakere D Revanasiddappa, a chemistry professor at Mysore University, suspects that some of his own papers, which Chiranjeevi collected during a visit to his lab in 2003, might have kick-started the operation.

'I was shocked that Chiranjeevi's paper on selenium had large portions of text and tables copied from the paper he took from us,' he told *Chemistry World*.

Chiranjeevi also plagiarised another three of his papers by changing the names of metals, reagents and test specimens.

Meanwhile, Chiranjeevi says the case against him was fabricated and the enquiry committee one-sided.
'By April I will be ready to fight in the court,'
he told *Chemistry World*. 'There is nothing to worry about.’

To:
Christian

From:
Pattium Chiranjeevi

I'd like to add you as a friend of mine on hi5.
Click the button below to find out more.

Join hi5!»

Don’t try to fool the editors

org. 0.5 lost in Xerox machine 9/8/95

TALANTA
Ms. No. CA5116
Date Rec'd: June 23, 1995
Date Revised:
Date Accepted:

SPECTROPHOTOMETRIC DETERMINATION OF TRACE BISMUTH(III) BY SUPPRESSIVE DESCOLORATION

Zhu Zhancai

(Dept. of Chem. Zhangzhou Teachers College, Fujian, PEOPLES Republic of China)

Abstract A new spectrophotometric method for the determination of Bi(III) on the oxidative fading between crystal violet and potassium iodate in the NH_3 medium at 95°C water both. The optimum experimental conditions has been explored. The $\log\frac{A}{A_0}$ is proportional to the concentration of Bi(III) over the range of 0~2.5 mg/25ml, the sensitivity of method is 0.2ng/ml (as $\log\frac{A}{A_0}=0.001$, b=1cm). The method has been applied to the determination of Bi(III) in samples with satisfactory results.

4 Reference

1 Otto, M., Rentsch, J., Werner, G. Anal. Chim. Acta, 1983, 147(1), 267

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3 朱玉佐，邵济馨. 分析化学，1987，15(10)，865

4 郑肇生，王秋光，林凤贞，张建华. 分析化学，1988，16(2)，138

5 郑肇生，王秋光，韩利平. 分析化学，1989，17(2)，160

6 张振辉，张改芬. 分析化学，1990，18(10)，929

7 张振辉，盛望喜，陈树. 分析化学，1991，19(7)，782

8 刘锡林，寇崇燕，陈兴国，胡之德. 分析化学，1992，20(3)，345

9 朱虎才. 分析化学，待发表。

10 张国荣. 分析化学，1990，18(12)，1145

Ms. Ref. No.: TAL-D-11-03399
Title: A magnetic nanoparticles-zinc oxide/zinc hexacyanoferrate hybrid film for amperometric determination of tyrosine
Talanta

Dear Dr.xxx,

This manuscript was recently rejected after review (ms. 11-2766). You then sent it to Editor Kauffmann, I guess hoping he would have it reviewed. As the reviewer pointed out before, the electrode (and numerous other similar ones from your laboratory) has limited novelty. We will not proceed with this manuscript.

Suggested Reviewers

1.Professor Munetaka Oyama,
Division of Research Initiatives,
Kyoto University, Japan.
E. Mail: oyama@iic.kyoto-u.ac.jp

Thank you very much for your reviewer invitation. After opening the contents, I have found that I am a co-author of this paper. So, I cannot referee the paper.
Sincerely yours,
Munetaka Oyama

Some authors will submit a rejected paper some time later

Hope the editor doesn’t notice and will have it reviewed again

El-S….

1. 8/18/05: Electrochemical…domperidone in drug formulations..
   Rejected, no review (routine application) by J-MK
2. 7/24/06: **Same paper.** Rejected, no review by JLB
   (since cover letter said submitted to ACA)

And:

3. 7/8/06: ..Extraction of Au(III) with amiloride.HCl
   Rejected, no review
4. 6/9/07: **Same paper.** Rejected, no review

Also:

5. 8/2/06: Speciation of Au(I) and Au(III) with amiloride.HCl
   Rejected after review
6. 10/4/07: **Same paper.** Accepted after 3 revisions.

If you resubmit to another journal, at least pay attention to reviewers from the first journal

It will improve the paper

Very often the reviewers will be the same

Dear Gary,

As I indicated in an earlier mail - I have seen this paper before. I therefore enclose my report (Analyst) together with the new one in an attachment to this mail.

Not so much has been changed in this paper. Maybe the language has improved a bit (revision probably still needed - English is not my mother tongue so I should be careful here). Still there is no explanation how the determinands migrate, what kind of charge they have, etc., why, why? It would be so simple to include. Did they not understand my previous report???

I cannot follow the logic behind this paper. The problem seems to be an artificial one - the real samples, on the other hand, offer a separation and quantification problem that would be possible to solve thereby making the paper more valuable.

Dear Dr. Murray,

I submit the following manuscript to Talanta….

Dear Professor Christian,

I submit the enclosed manuscript to Analytica Chimica Acta…

Dear Gary,

I received the attached review on manuscript PH901 for Anal Chim Acta.
The reviewer comments about seeing something very similar for Talanta
Are you able to check into this to see if there is duplication of the Talanta manuscript?

Bets regards,

Paul

Dear Paul,

Yes, we have seen this paper, and rejected it, so the author is recycling it.
Attached is the review we received.
Best regards,
Gary

Don’t plagiarize introductory material

Especially in your thesis – it may wind up in a paper

Remember, your professor may not catch this

Submit to the right journal

Read the aims and scope of the journal

Talanta often receives papers having nothing to do with analytical chemistry

Some are good quality,
but they are returned

Publish with Major Revision

Comments:
The main problem with this paper is the English.
It is not properly written and in some sentences it is difficult to understand what the authors want to explain and some description are not in chemistry language;

EX "The zero-order spectra of PV buffer solution and dilute blank liposome suspension were plane in the range 600-700 nm, while the spectrum of PV-Cu was steep in the same range (Fig.2A)." Must be changed to something like "The zero order spectra of PV buffer solution and dilute blank liposome suspension has a band, with a max of …, while the spectrum of PV-Cu has a band, with a with a max of …,"

Don’t be afraid to get some expert help on your English.

Even if it is excellent, it doesn’t hurt to have someone else critique your work

It will help reviewers understand and accept the work

You can rebut reviewer comments

Sometimes they miss something or just don’t understand

Two reviewers may have differing opinions

It is the editor who makes the decision

Plagiarism detection tools

eTBLAST is a text similarity search engine

http://etest.vbi.vt.edu/etblast3/

Relevancy Threshold (Similarity ratio = 0.56). Entries above here have an unusual level of similarity

Deja Vu: a Database of Highly Similar Citations

http://spore.vbi.vt.edu/dejavu/

iThenticate - Identifies by color code identical sections from other papers, including the author's, gives word count

RETRACTED: Long-Term Quality of Life After Lung Resection

Thoracic Surgery Clinics, ... 2008

- This article has been **retracted** at the **request** of the **Editor**-in-**Chief**.

Reason: significant portions of this article (605 words, 7 paragraphs) were copied verbatim from an article published in *Chest* without attribution

Author's similar papers:

Medline

Scopus – author

Google Scholar

SciFinder Scholar

2011 Talanta manuscripts, Gary Christian				
Number	Accept	Reject	In review	% Reject
478	148	302	14	65.1
No reviews	% No review			
164	34.3			

Be brave

Write that first paper

You will learn by doing

Expect criticism
- **your professor**
- **reviewers**

That is normal

99% of the papers I accept in *Talanta* require revision

Over half of all manuscripts are rejected

THANK YOU,
and Happy
Writing!