



Writing Scientific Papers: Talent or Training?

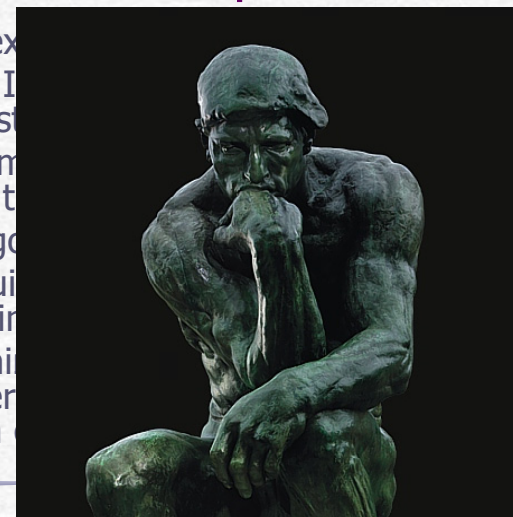
Enrico TRAVERSA

WP International Research Center for Materials
Nanoarchitectonics (MANA), National Institute for
Materials Science (NIMS), Tsukuba, Japan

第7回NIMSオープンセミナー「Writing Scientific Papers」
Prof. Enrico Traversa, National Institute for Materials Science
2009年3月9・10日 (独) 物質・材料研究機構 千現地区 第一会議室 主催: 科学情報室
注: プレゼンテーションと一部異なる場合があります。

Should I accept the invitation?

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Enrico TRAVERSA

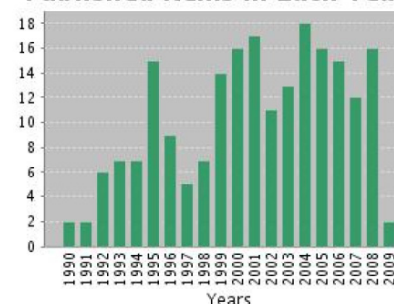
- 1986 PhD in Chemical Engineering, Univ. Rome La Sapienza

Academic positions

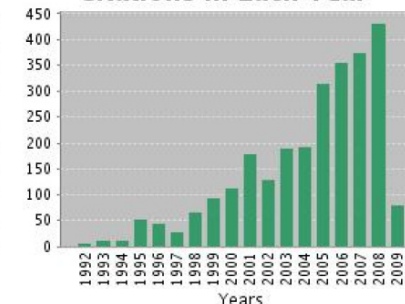
- 1988-1992 Assistant Professor (Ricercatore), Dept. Chemical Science and Technology, Univ. Rome Tor Vergata
- 1992-2000 Associate Professor of Materials Technology, Univ. Rome Tor Vergata
- 2000- date Full Professor of Materials Science and Technology, Univ. Rome Tor Vergata
- 2001- date Director of the Doctorate Course in **Materials for Health, Environment and Energy**, Univ. Rome Tor Vergata
- 2009- date Principal Investigator at WP International Research Center for Materials Nanoarchitectonics (MANA), National Institute for Materials Science (NIMS), Tsukuba, Japan

ISI Web of Knowledge

Published Items in Each Year



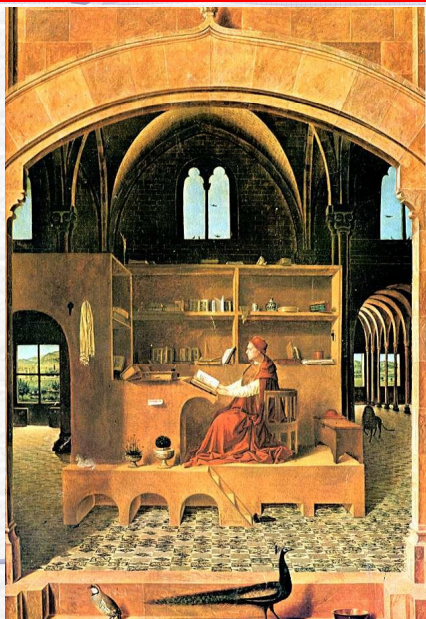
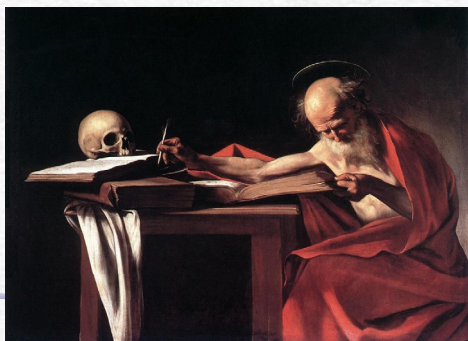
Citations in Each Year



Results found: **211**
Sum of the Times Cited: **2,683**
Average Citations per Item: **12.72**
h-index: **26**

SCOPUS

Results: **284**
h-index: **29**



SCOPUS

Results: **284**
h-index: **29**



My first paper on ceramics:

Journal of the European Ceramic Society 7 (1991) 31–39

The Mechanism of MgAl_2O_4 Spinel Formation
from the Thermal Decomposition of Coprecipitated
Hydroxides

G. Gusmano, P. Nunziante, E. Traversa

Dip. Scienze e Tecnologie Chimiche, II Università di Roma "Tor Vergata", Via O. Raimondo, 00173 Roma, Italy
&

G. Chiozzini

Ist. Teoria e Struttura Elettronica, C.N.R., Area della Ricerca di Roma, Via Salaria Km 28.500, 00016
Monterotondo Stazione (ROMA), Italy

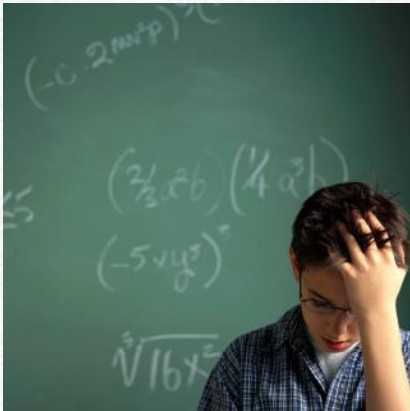
(Received 6 July 1990; accepted 25 July 1990)

It took me 9 months to write it!!!



Like a delivery!

It was a learning experience



The paper was accepted
without revisions:

Talent!

Prof. Yoshihiko Sadaoka



First meeting: Roma, September 1990



Visiting Matsuyama to write papers

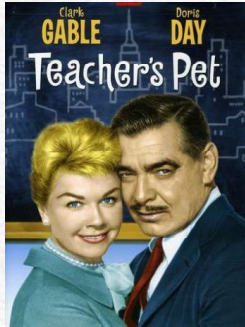


Training!



Guidance and tutoring of students

- 22 Master Thesis Students
- 30 PhD Students
- 25 Post-Docs



Riccardo Polini



Most of the students are not talented



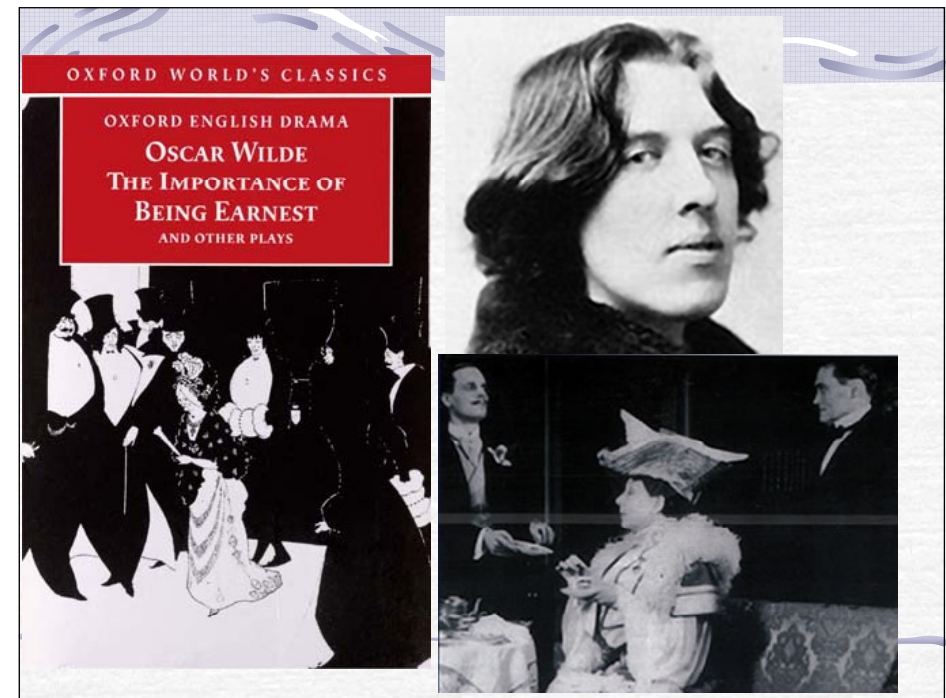
Checking their fist draft of a paper is...

Sometimes also the second draft is:



The PhD student has to learn how to write manuscripts by himself

- ✎ Writing papers force the student to understand his work.
- ✎ Never hire as a post-doc someone who did not write papers by himself (some good Professors like to write also for their students – do not trust).
- ✎ Professors have to guide and correct mistakes.
- ✎ Without talent, **training** can help.



Golden rules to write manuscripts

- ✎ You have to tell a story.
- ✎ Make clear why are you telling the story, what is your goal (the conclusions).
- ✎ Keep the story simple, do not try to tell too many things all together.
- ✎ Choose the figures first and check that you have all the pieces needed to support your story.
- ✎ Put your story in a context and make it appealing: write the background in the introduction.
- ✎ Write the paper, then write the abstract at the end, and finally go back to the conclusions and check that everything is sound.

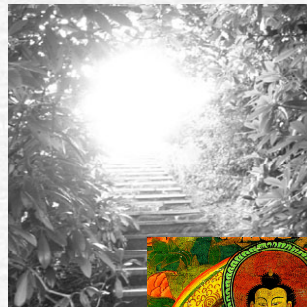
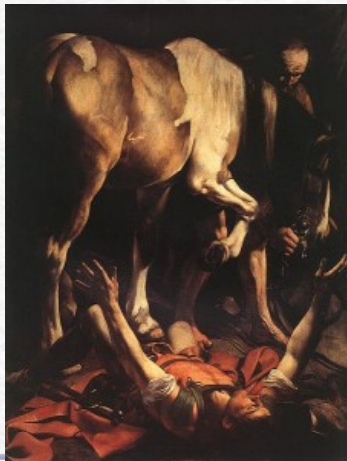


Exercise of writing

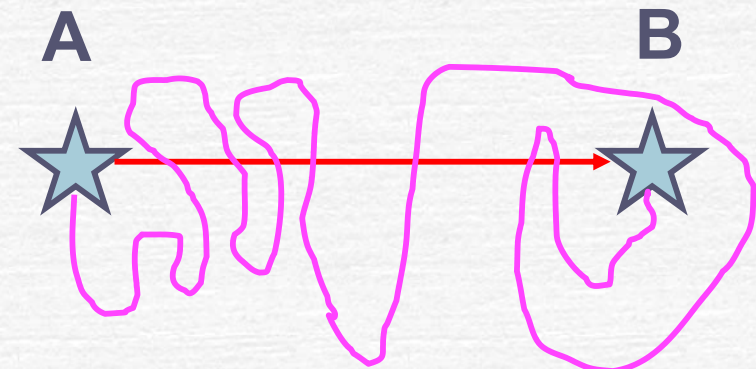
- Writing novels: needs creativity and imagination
- Writing scientific papers: needs creativity, different kind of imagination, and **logic**
- You can develop your **style** also in writing scientific papers



Clarity of mind



Clarity of mind



Both ideas and words should be straightforward

My Research Topics

- ✦ Corrosion
- ✦ Humidity sensors
- ✦ Semiconducting oxide gas sensors
- ✦ p-n heterocontacts
- ✦ Electrochemical gas sensors
- ✦ Solid oxide fuel cells
- ✦ Polymeric electrolyte membrane fuel cells
- ✦ Lithium ion batteries
- ✦ Solar cells
- ✦ Plastics recycling
- ✦ Nanostructured materials
- ✦ Hybrid materials
- ✦ Mesosstructured materials
- ✦ Nanocomposites
- ✦ Diamond films
- ✦ Antibacterial/antifungi coatings and films
- ✦ Tissue engineering
- ✦ Nanotoxicology
- ✦ Drug delivery
- ✦ Thin films
- ✦ Thick films



194 citations

Sensors and Actuators B 23 (1995) 135–156



Ceramic sensors for humidity detection: the state-of-the-art and future developments

Enrico Traversa

Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata", via della Ricerca Scientifica, 00133 Rome, Italy

Received 15 September 1993; accepted 20 September 1994



75 citations

Sensors and Actuators B 31 (1996) 59–70



Ceramic thin films by sol-gel processing as novel materials for integrated humidity sensors

Enrico Traversa^{a,*}, Guglielmina Gnappi^b, Angelo Montenero^a, Gualtiero Gusmano^a

^a*Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata", via della Ricerca Scientifica, 00133 Rome, Italy*

^b*Co.R.I.Ve., Viale delle Scienze, 43100 Parma, Italy*
^c*Dipartimento di Chimica Generale e Inorganica, Chimica Analitica, Chimica Fisica, Università di Parma, Viale delle Scienze, 43100 Parma, Italy*



Sensorion

Journal

J. Am. Ceram. Soc., **91** [4] 1037–1051 (2008)
DOI: 10.1111/j.1551-2916.2008.02347.x
© 2008 The American Ceramic Society

Design of Electroceramics for Solid Oxides Fuel Cell Applications: Playing with Ceria

Vincenzo Esposito[†] and Enrico Traversa^{*}

Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata", Roma, Italy

Feature



Journal



DOI: 10.1002/fuoc.200700045

Fuel Cells

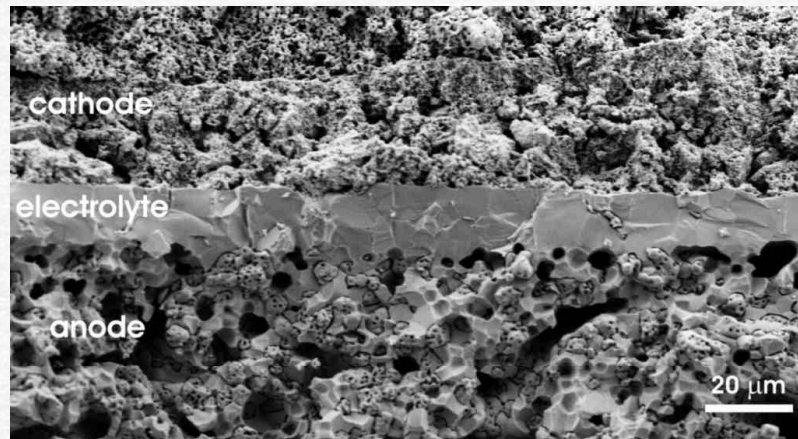
Design of BaZr_{0.8}Y_{0.2}O_{3-δ} Protonic Conductor to Improve the Electrochemical Performance in Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs)

A. D'Epifanio^{1,*}, E. Fabbri¹, E. Di Bartolomeo¹, S. Licoccia¹, and E. Traversa¹

¹ *Department of Chemical Science and Technology, University of Rome Tor Vergata, Via della Ricerca Scientifica 1, Rome 00133, Italy*

Received July 30, 2007; accepted December 14, 2007

Complete Fuel Cell



STEM CELLS 2008;26:2093–2103

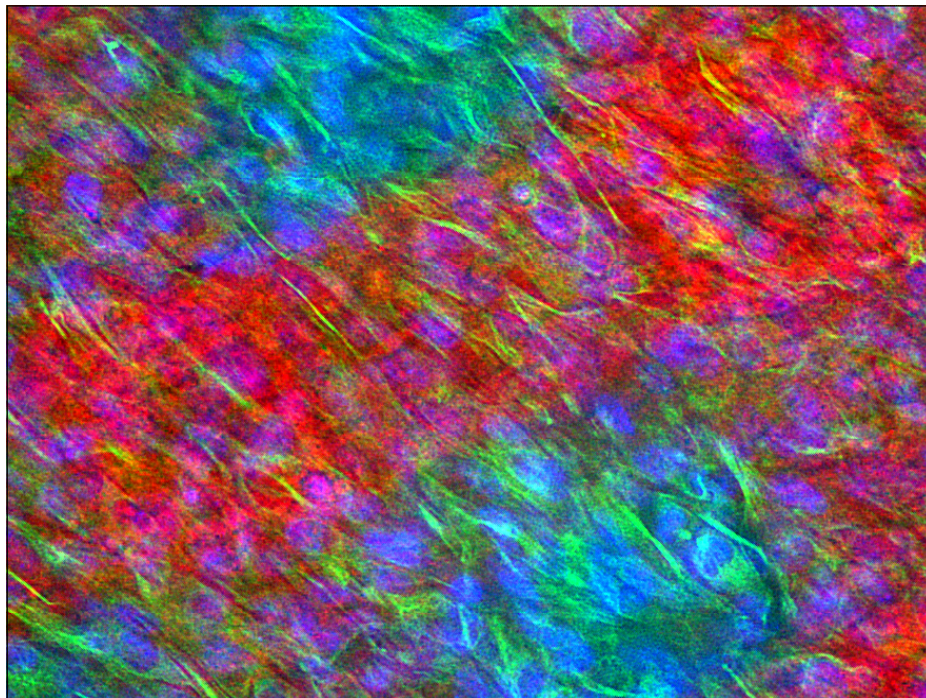
STEM CELLS

TISSUE-SPECIFIC STEM CELLS

Criticality of the Biological and Physical Stimuli Array Inducing Resident Cardiac Stem Cell Determination

GIANCARLO FORTE,^{a,b} FELICIA CAROTENUTO,^a FRANCESCA PAGLIARI,^a STEFANIA PAGLIARI,^c PAOLO COSSA,^a ROBERTA FIACCAVENTO,^a ARTI AHLUWALIA,^d GIOVANNI VOZZI,^d BRUNA VINCI,^d ANNALUCIA SERAFINO,^e ANTONIO RINALDI,^{f,g} ENRICO TRAVERSA,^{f,g} LUCIANA CAROSELLA,^h MARILENA MINIERI,^{a,g} PAOLO DI NARDO^{a,g}

^aLaboratorio di Cardiologia Molecolare e Cellulare, Dipartimento di Medicina Interna, Università di Roma Tor Vergata, Roma, Italy; ^bIstituto Nazionale per le Ricerche Cardiovascolari (INRC), Bologna, Italy; ^cSyntech srl, Roma, Italy; ^dCentro Interdipartimentale di Ricerca "E. Piaggio," Università di Pisa, Pisa, Italy; ^eIstituto di Neurobiologia e Medicina Molecolare, Consiglio Nazionale delle Ricerche, Roma, Italy; ^fDipartimento di Scienze e Tecnologie Chimiche, Università di Roma Tor Vergata, Roma, Italy; ^gCentro per le Nanoscienze, le Nanotecnologie e la Strumentazione Innovativa (NAST), Università di Roma Tor Vergata, Roma, Italy; ^hIstituto di Medicina Interna e Geriatria, Università Cattolica S. Cuore, Roma, Italy



In summary....

L'Elisir d'amore...



...does not exist.

どうも ありがとう
ございました

