

IFCC General Conference, Madrid, 19 March 2016  
**Digital publishing in academia: recent  
advances**

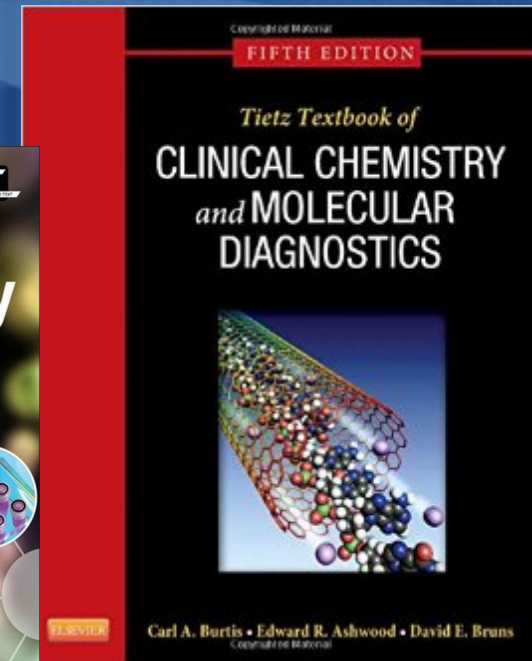
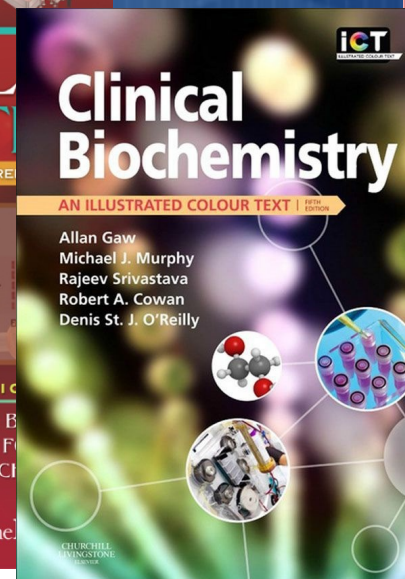
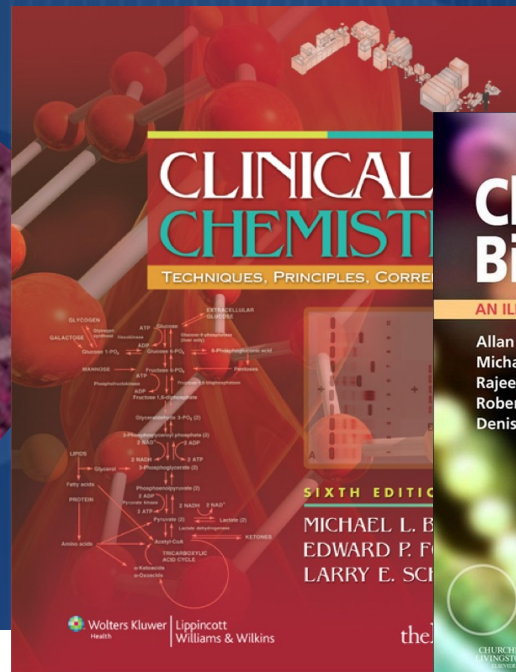
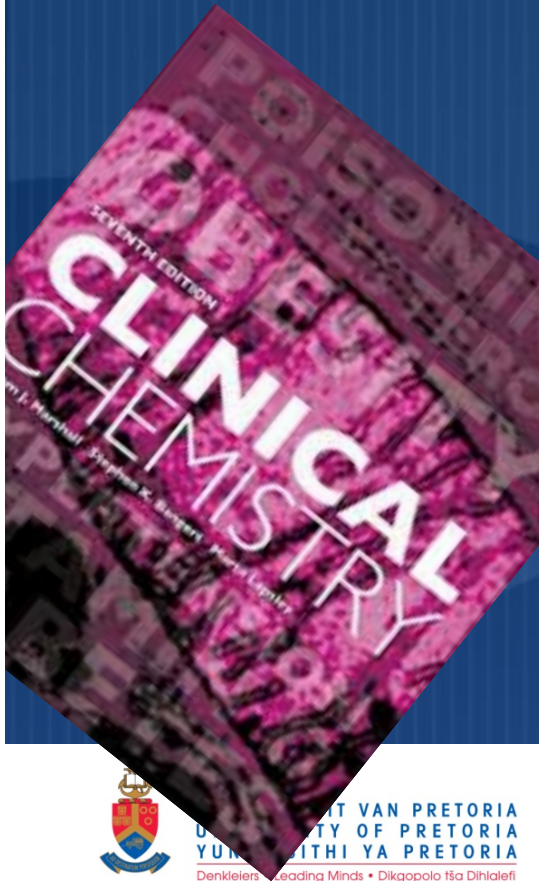
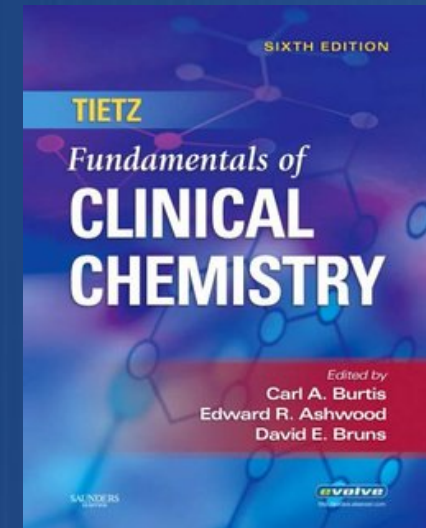
**Prof T.S Pillay**

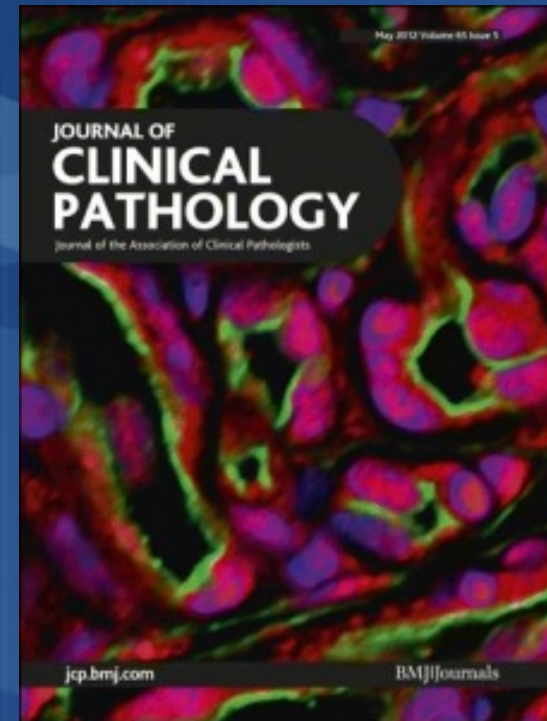
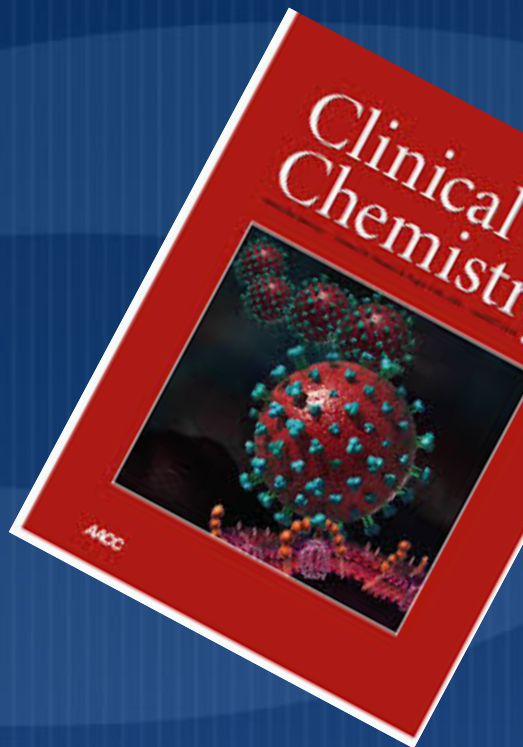
Chief Specialist, Professor & Chair,  
Department of Chemical Pathology & NHLS Tshwane  
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University of Pretoria, South Africa  
eNews Editor, IFCC



# Academic publishing

- Different things to different people
- Books, research papers







# Digital publishing

- Portable document format –PDF
- Developed by Adobe- early 1990s
- Share documents between users of different platforms
- Adoption slow initially
- Acrobat Reader 2.0



# Digital publishing within IFCC

- eJIFCC
- eNewsletter



# Traditional PDF

- 2 dimensional
- Designed for paper documents
- Isolated technology, not designed to merge with HTML5



# Beyond PDF

- 4-dimensional documents
- Incorporate audio and video



# The use of textbooks

- Billion dollar industry
- Printed textbooks expensive
- Developing countries – member countries of IFCC





# Student survey

- 99% own one smart device
- 93% laptops
- 78% smartphones
- 35% tablets
- 79% students using a digital textbook – 63% in 2011
- USA- \$12 Billion on textbooks; 27% on digital textbooks



# Digital books

- PDF books



# ePub

- an e-book file format with the extension .epub which can be downloaded and read on devices like smartphones, tablets, computers, or e-readers.
- International Digital Publishing Forum
- Official standard in 2007
- EPUB is the most widely supported vendor-independent XML-based (as opposed to PDF) e-book format; that is, it is supported by the largest number of hardware readers



# ePub

- widely used on many software readers such as iBooks on iOS and Google Books on Android.
- iBooks also supports the proprietary iBook format, which is based on the EPUB format but depends upon code from the iBooks app to function.



# ePub

- ePub 2.0 – October 2007
- ePub 3.0 – November 2014 – precise layout or specialized formatting; HTML5; MathML support





# 16 e-textbook providers: Who's publishing and who's selling?

- Pearson – iBooks
- Amazon- Kindle
- Macmillan- DynamicBooks
- MacGrawHill- Smartbooks



Boitumelong Secondary is one of 7 Gauteng schools earmarked to pilot the paperless classroom. It was a hive of activity today as teachers and students came to school early to familiarise themselves with the new tools.

*Luckily there is a dedicated technician on hand to help iron out inevitable issues with first-time users.*



*Learners at Boitumelong Secondary get acquainted with their tablets Pic: EWN*



	Apple	Amazon	B&N	Kobo	Sony	Google
Format	ePub2/ePub3	KF8	NOOK Kids	ePub3	ePub3	ePub3
Narration	✓	✗	✓	✓	✗	✗
Narration Text Highlighting	✓	✗	✗	✗	✗	✗
Region/Text Magnification	✗	✓	✓	✗	✗	✗
Embedded Audio/Video	✓	✗ *	✗	✓	✗	✗
Background Music	✓	✗	✗	✗	✗	✗
Animations	✓	✗	✗	✗	✗	✗
Interactive Elements	✓	✗	✗	✗	✗	✗



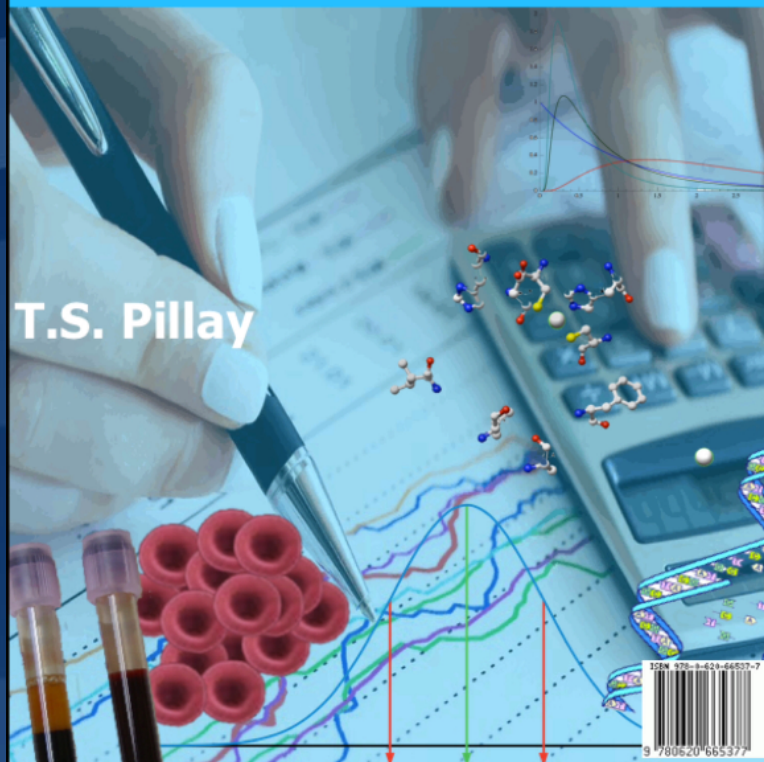
# Demonstrations

- Practical Clinical Chemistry
- Interactive Mathematics for Laboratory Medicine
- History of South Africa prototype
- Structures in Chemistry prototype





FIRST EDITION  
**Interactive Mathematics  
for Laboratory Medicine**



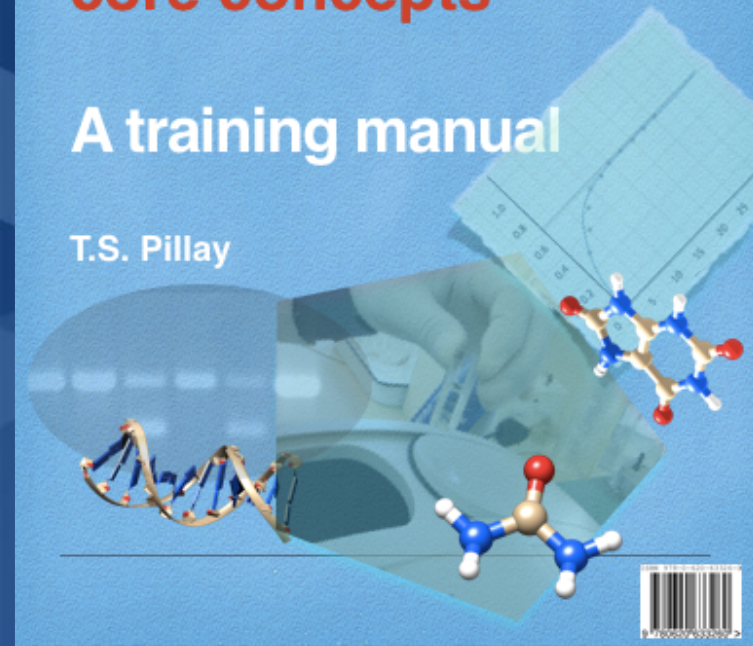
<https://itunes.apple.com/us/book/interactive-mathematics-for/id1038925720?mt=11>

First Edition

**Practical Clinical  
Chemistry:  
core concepts**

**A training manual**

T.S. Pillay



<https://itunes.apple.com/us/book/practical-clinical-chemistry/id951030209?mt=11>



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NATIONAL HEALTH  
LABORATORY SERVICE

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# Thank you for your attention



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