

# Editoria - settembre 2017

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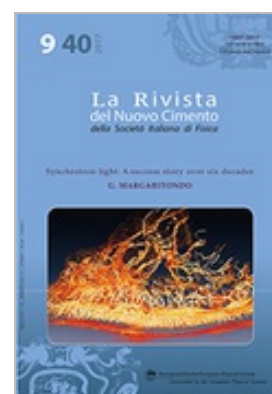
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## La Rivista del Nuovo Cimento, Vol. 40, N. 9 (2017)

### Synchrotron light: A success story over six decades

G. Margaritondo

What is a billion times brighter than the sun? What can radiograph a single cell? What can read ancient manuscripts without opening them? What can boost a performance increase faster than computer technology? The answer is the same magic word: "synchrotrons". Used by tens of thousands of scientists worldwide, synchrotron radiation is now at the center of research in physics, chemistry, materials science, biomedicine, applied science and other disciplines. Yet, the use of synchrotron radiation started by accident and its usefulness was not recognized for more than two decades. It struggled initially to find a few thousand dollars and faced multiple rejections – but its funding reaches now tens of billions. These and many other fascinating facts are revealed by this historical review, from the first steps to the most powerful sources of light ever, the free electron lasers of today. A story of science and technology but also of everyday human courage, fantastic intuitions and terrible mistakes, which transformed an arcane relativistic phenomenon into the biggest worldwide research network of all times.



## Il Nuovo Cimento, Vol. 40, N. 2 (2017)

This issue of Il Nuovo Cimento is dedicated to a selection of the best communications at the *102nd National Congress of the Italian Physical Society*, held in Padova on 26-30 September 2016, by a number of young, talented members of the Society. The National Congress is a good occasion to prize these young physicists of different fields with a rapid publication of their results and Il Nuovo Cimento is particularly suitable to comprehensively highlight them.



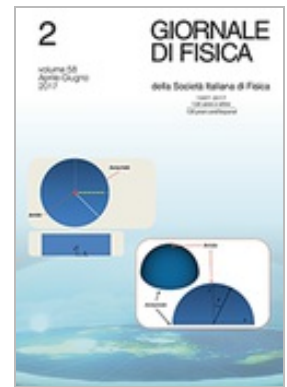
## Giornale di Fisica, Vol. 58, N. 2 (2017)

È online e in distribuzione il secondo numero del Vol. 58 del 2017.

In questo numero, oltre a due interessanti articoli su: "La forma della Terra: una lezione sulla gravità Newtoniana" e "Modelli del campo di dipolo", troverete un esteso studio di Paolo Rossi su:

**"La Fisica universitaria italiana tra riforme e crisi (2000-2016)".**

Si tratta di un rapporto che analizza soprattutto sotto il profilo quantitativo, gli effetti sulla Fisica delle trasformazioni avvenute a partire dal 2000, sia per quanto riguarda l'organizzazione e l'impatto della didattica, sia per ciò che concerne l'assetto del personale docente e ricercatore, di ruolo e temporaneo. Sono evidenziati gli effetti negativi della crisi economico-politica sul sistema universitario, particolarmente sentiti nei settori della cosiddetta "hard science", che hanno pagato il prezzo più elevato in termini di perdita di capitale umano. I dati disponibili anche se non sempre completi, sono tuttavia sufficienti a ricavare un quadro ricco e articolato della situazione attuale, in grado di evidenziare le maggiori criticità e indicare possibili direzioni evolutive.



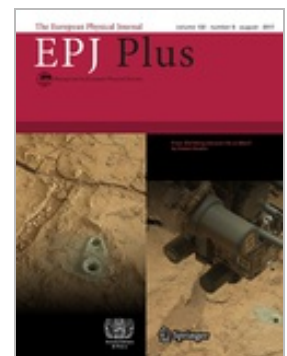
**EPJ Plus – Highlights**

**On the dynamics of HIV-AIDS and cryptosporidiosis**

*K.O. Okosun, M.A. Khan, E. Bonyah, S.T. Ogunlade*

One of the most common waterborne diseases worldwide is cryptosporidiosis, a parasitic disease affecting the small intestine and possibly our airways. It is a common cause of diarrhoea in HIV-positive patients, who are known to have lower immunity. Now Kazeem Oare Okosun from Vaal University of Technology in South Africa and colleagues from Pakistan and Nigeria have developed a new model and numerical simulations to determine the optimal combination of prevention and treatment strategies for controlling both diseases in patients who have been co-infected. Their results, recently published in EPJ Plus, show a positive impact on the treatment and prevention for cryptosporidiosis alone, for HIV-AIDS alone, or for both together.

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