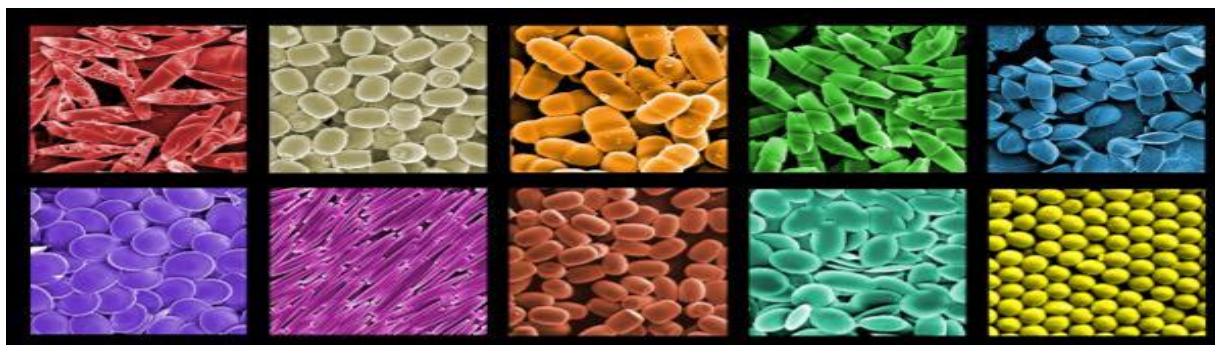


Diossido di Titanio: da Filler ad Additivo Funzionale



In collaborazione con

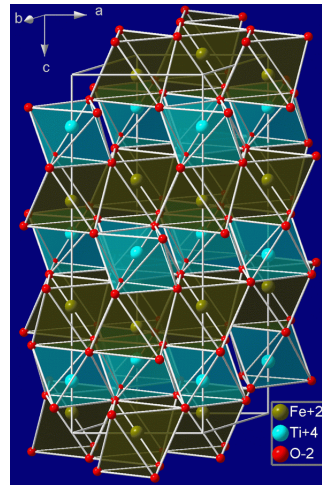


Il progetto 'Green Sinks'
è co-finanziato dallo Strumento Finanziario LIFE della Comunità Europea



Dr. Matteo Di Nicola,
Università di Camerino

TiO₂: Produzione Industriale



Miniera a cielo aperto di Ilmenite a
Tellnes, Sokndal, Norway

Paesi Produttori

- Australia
- Sud Africa
- Canada
- Mozambico
- India
- Cina
- Vietnam
- Ucraina
- Norvegia
- Madagascar
- Stati Uniti



Il TiO_2 Intorno a Noi

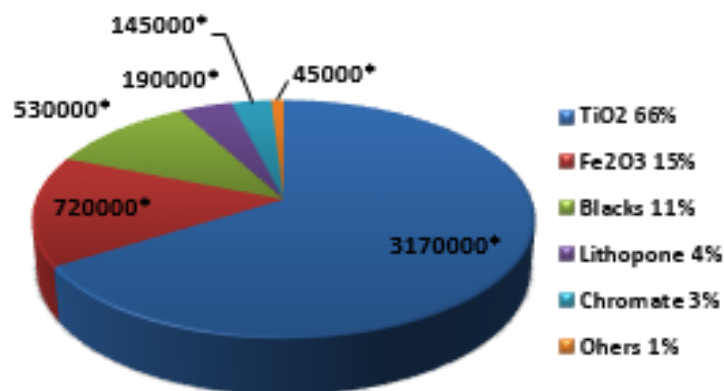


TiO_2

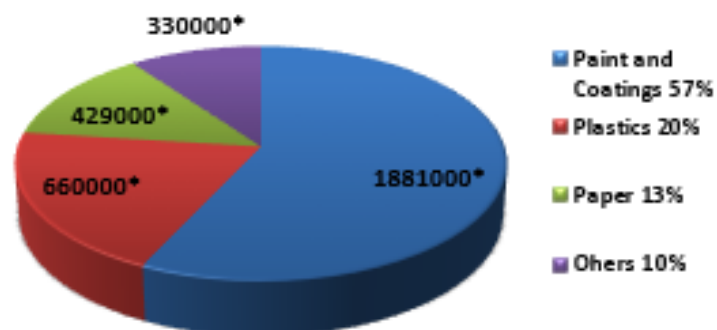


I Numeri del TiO_2

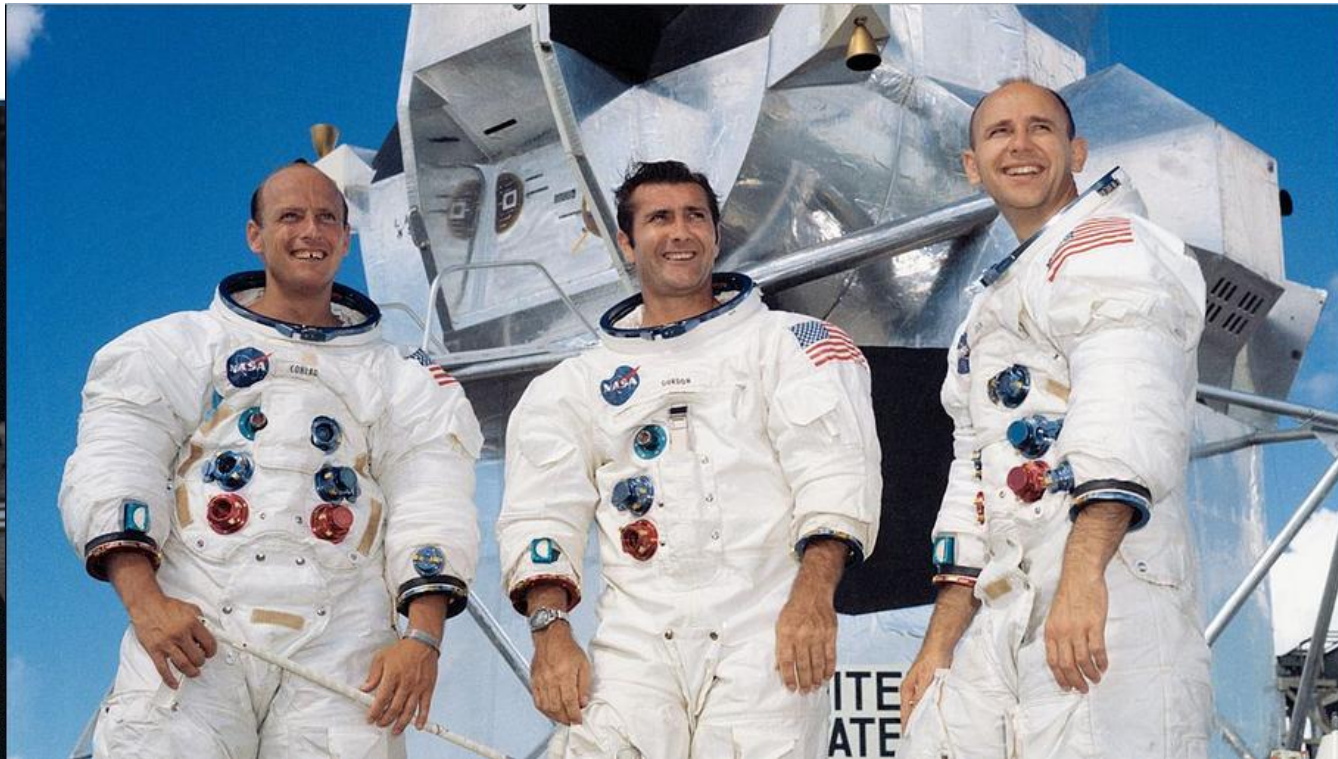
1996 World Pigment Production



1996 World TiO_2 Consumption



* Amounts in Tonnes per Annum



MSFC 67 IND 1200-65A

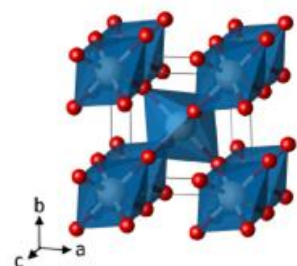
Apollo 12

J002E3

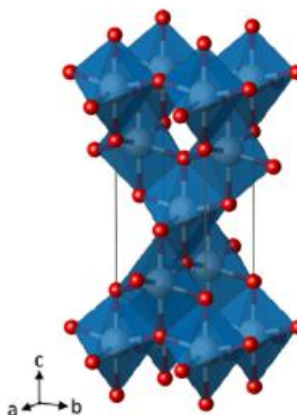
Lancio: 14 Novembre 1969

Allunaggio: 19 Novembre 1969

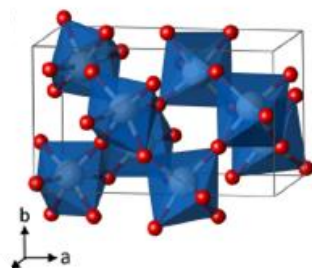
TiO₂: Struttura Cristallina



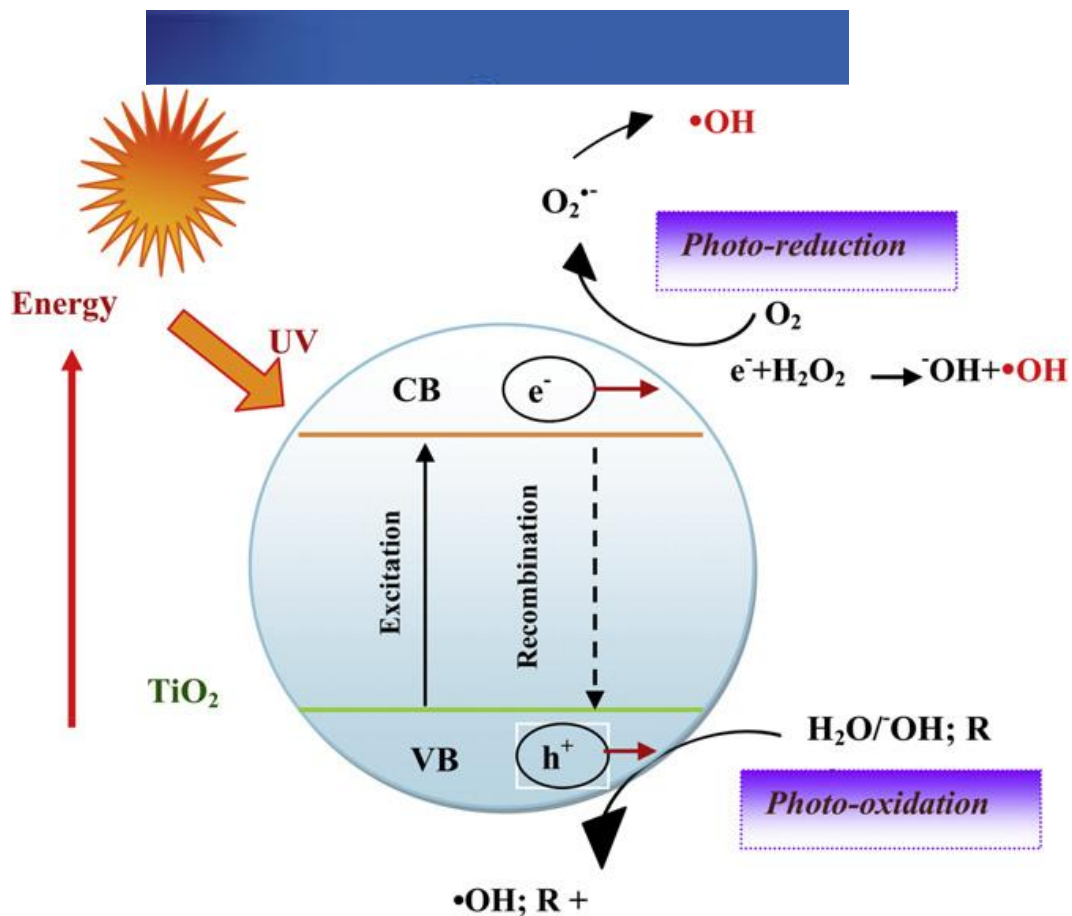
Rutile



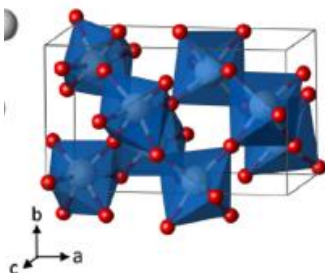
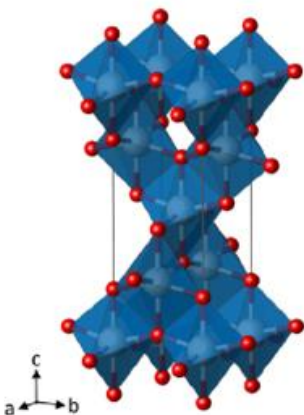
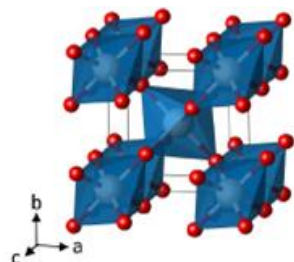
Anatase



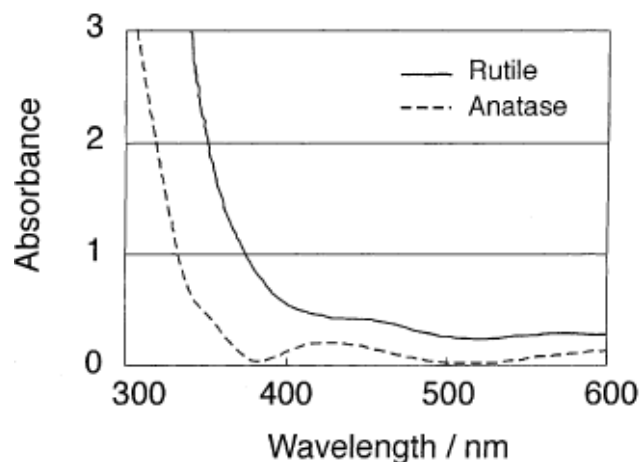
Brookite



Anatasio e Rutile : semiconduttori e fotocatalizzatori



Property	Anatase	Rutile
Crystal structure	Tetragonal	Tetragonal
Atom per unit cell (Z)	4	2
Density (Kg/m ⁻³)	3894	4250
<u>Experimental band gap</u>		
(eV)	≈ 3,2	≈ 3,0
(nm)	≈ 387	≈ 413
Refractive Index	2,54-2,49	2,79-2,90
Solubility	HF	-



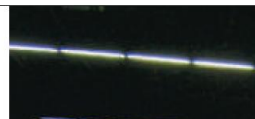
[GREEN ECONOMY]

L'asfalto che respira

INQUINAMENTO Un'azienda e due università hanno unito le forze. E hanno prodotto il Coverlite, un'emulsione che ripulisce «copiando» la fotosintesi clorofilliana.

di Stefano

Strade, piazze, parcheggi, e tutte le aree aperte in asfalto, pietra, cemento, possono diventare dalla curatela antismog.

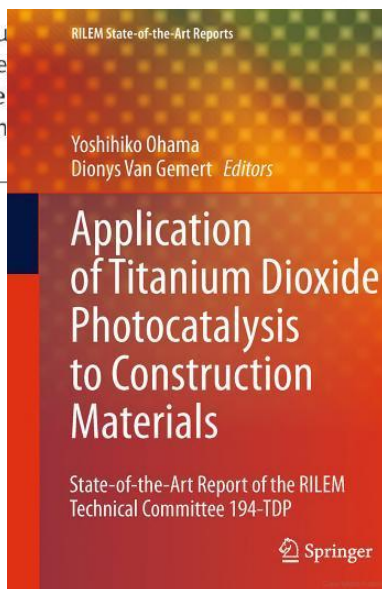


Gres auto-pulente per la Granarolo

Il progetto firmato dall'architetto Luca (studio Open Project) prevede l'impiego di una facciata ventilata capace di mantenere nel tempo il caratteristico colore bianco.

DI MILA FIORDALISI

Oltre 500 mq di pareti ventilate a base di un rivestimento ceramico antibatterico. Sarà un edificio a elevata sostenibilità ambientale: quello destinato a ospitare la nuova sede direzionale della



Lo staff della Kuomm: monterà il titanio antismog

Ripulire l'aria con l'edilizia Pareti di titanio in via Eridano

Per Natale i progettisti della Kuomm si faranno un regalo particolare, tanto luccicante quanto utile. La loro sede, in via Eridano, sarà interamente rivestita di titanio anodizzato, capace di "ripulire" l'aria dallo smog. Sarà il primo esperimento del genere in Italia, anche per questo stiamo superando una serie di difficoltà come il reperimento del materiale dal

mento del titanio che lo rende in grado di ossidare le particelle di inquinanti ambientali come anidride carbonica, ossidi di azoto, fenoli, benzene, toluene, formaldeide. In pratica, le particelle a contatto con questa superficie vengono rese inerti, non pericolose. I ferraresi si sono rivolti all'unica società che commercializza questo materiale, la Alu Build, e all'architet-



TIME

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"This is wh[♂] I am."

THE TRANSGENDER
FIGHT FOR EQUALITY

Best Inventions of 2008 >

From a genetic testing service to an invisibility cloak to an ingenious public bike system to the world's first moving skyscraper — here are TIME's picks for the top innovations of 2008

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 Tweet 2

 +1 5

 Share 9

THE OTHER 49 BEST INVENTIONS

37. Smog-Eating Cement



[VIEW ALL](#)

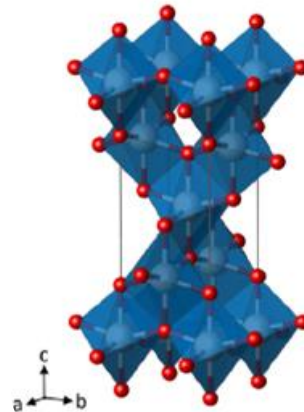
Take ordinary cement. Mix in an agent called a photo-catalyzer (titanium dioxide, if you really want to know), which speeds up the natural process that breaks down smog into its component parts. Now start paving things with the stuff. That's what they're doing in Segrate, an Italian town near Milan. The smog-eating cement is called TX Active, and the Italian firm Italcementi spent 10 years developing it. Now there's a busy street in Segrate that's covered with it, and Italcementi claims it has reduced nitric oxides in the area by as much as 60%. Bonus: buildings made with TX Active stay cleaner too.



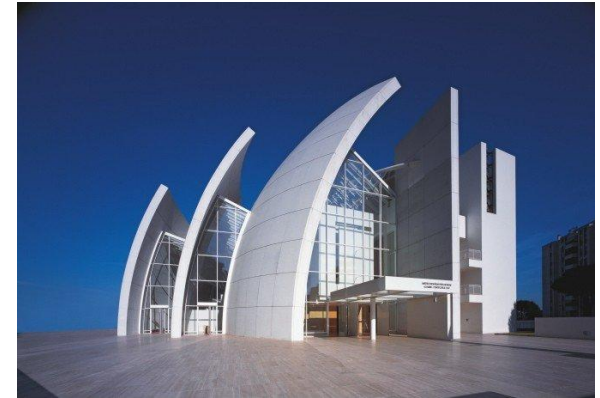
TiO_2 : Materiali Self-Cleaning e Riduzione dell'Inquinamento



Torre de especialidades
Città del Messico



Anatasio

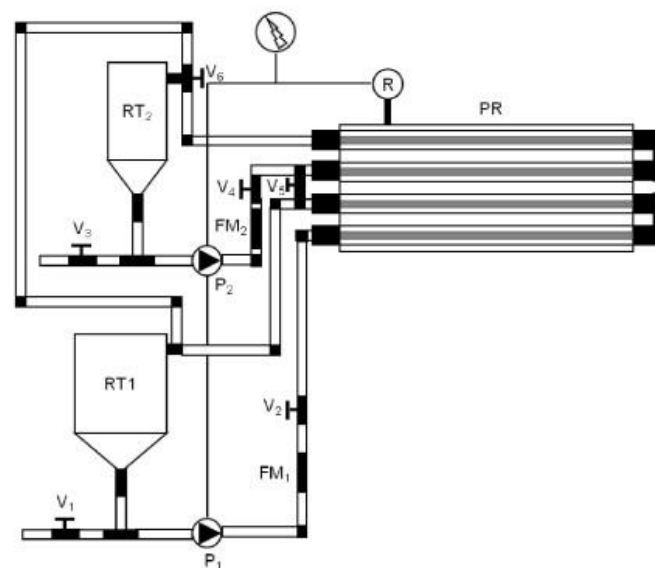
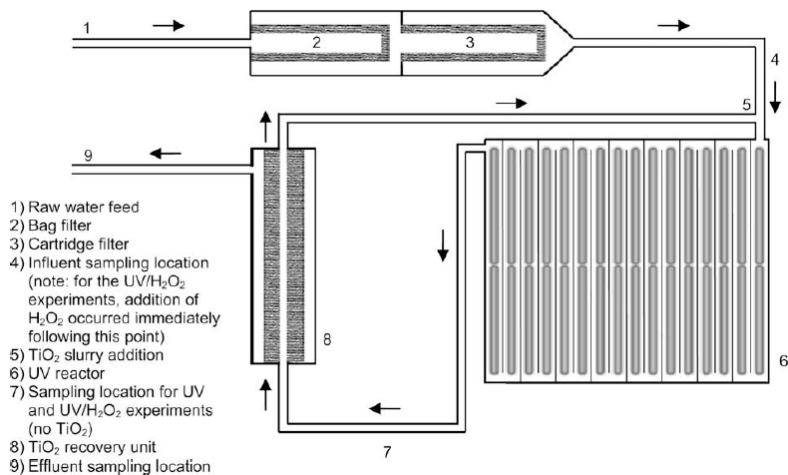
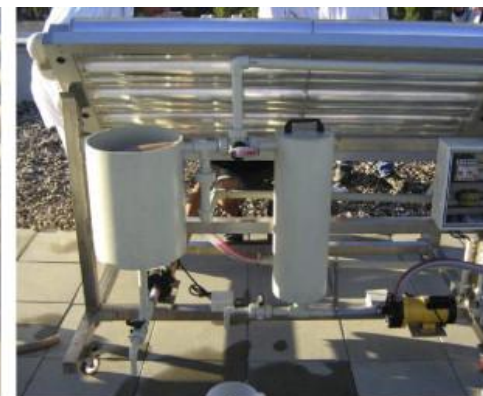
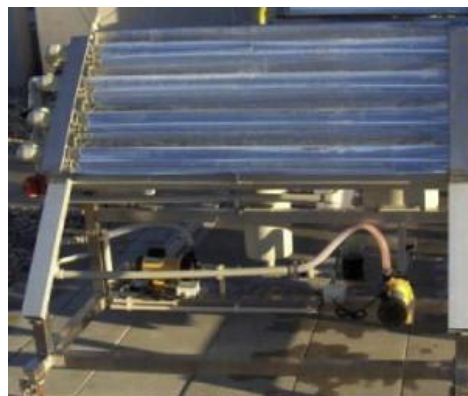


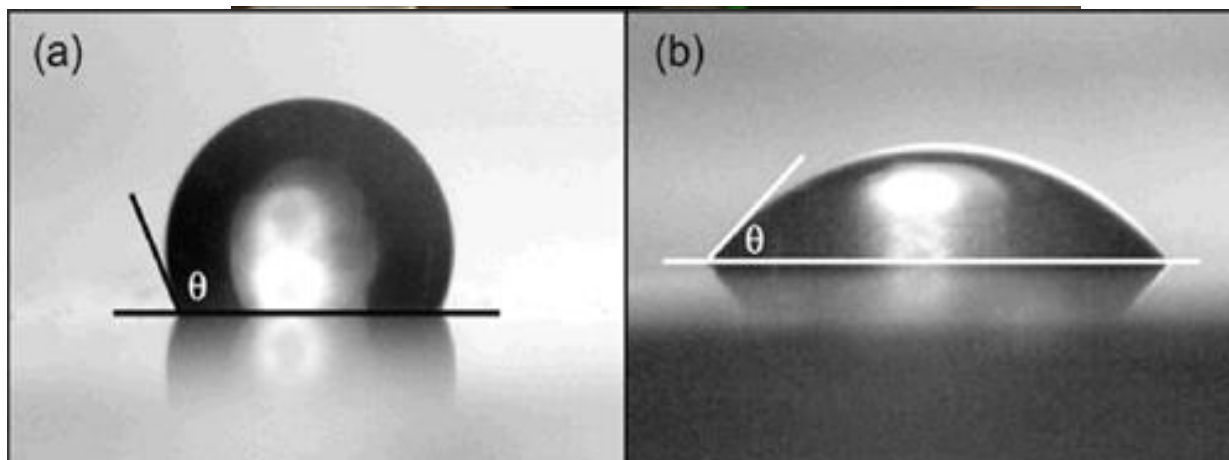
Jubilee Church
Roma



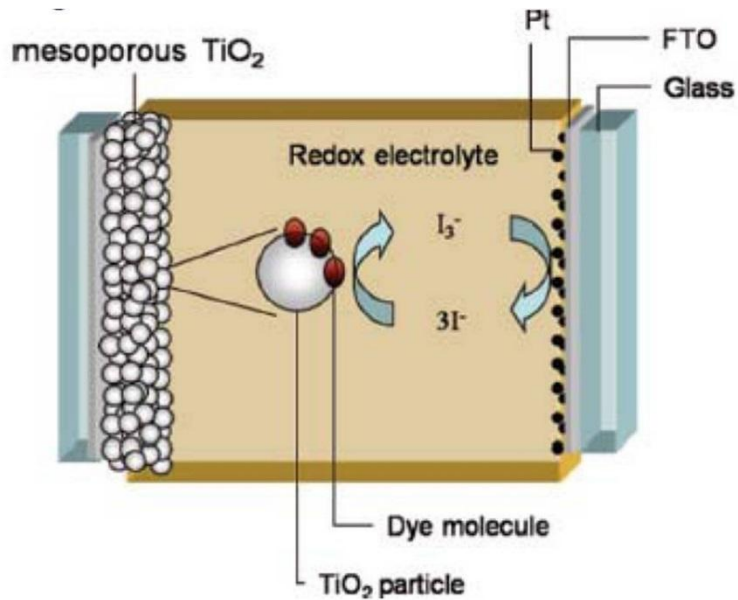
Antwerp, Belgio

TiO₂: Trattamento delle Acque





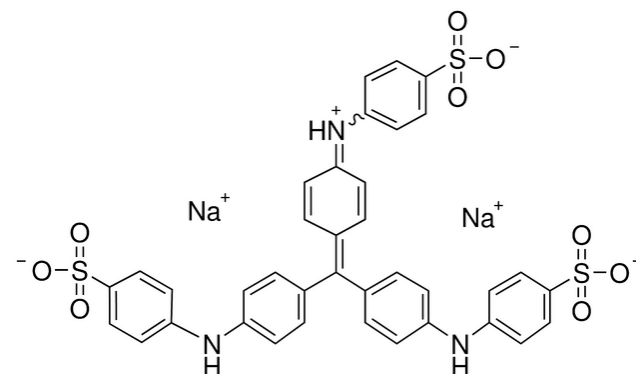
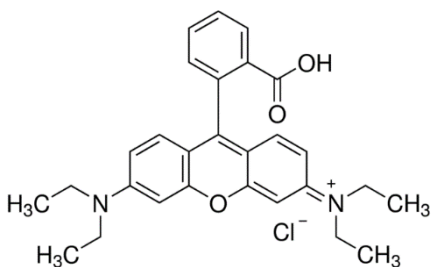
TiO₂: DSSC Dye-Sensitized Solar Cell



Vantaggi

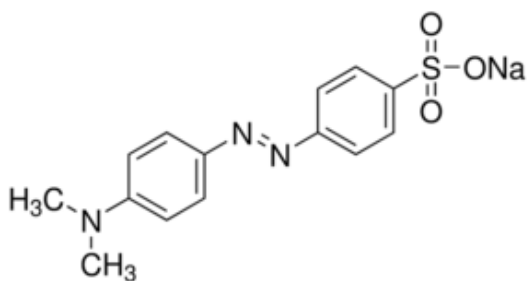
- Alta Efficienza
- Leggerezza
- Trasparenza
- Robustezza



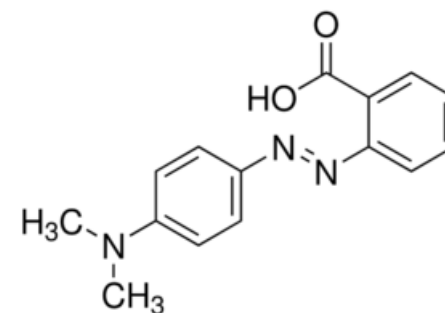


Rhodamine B

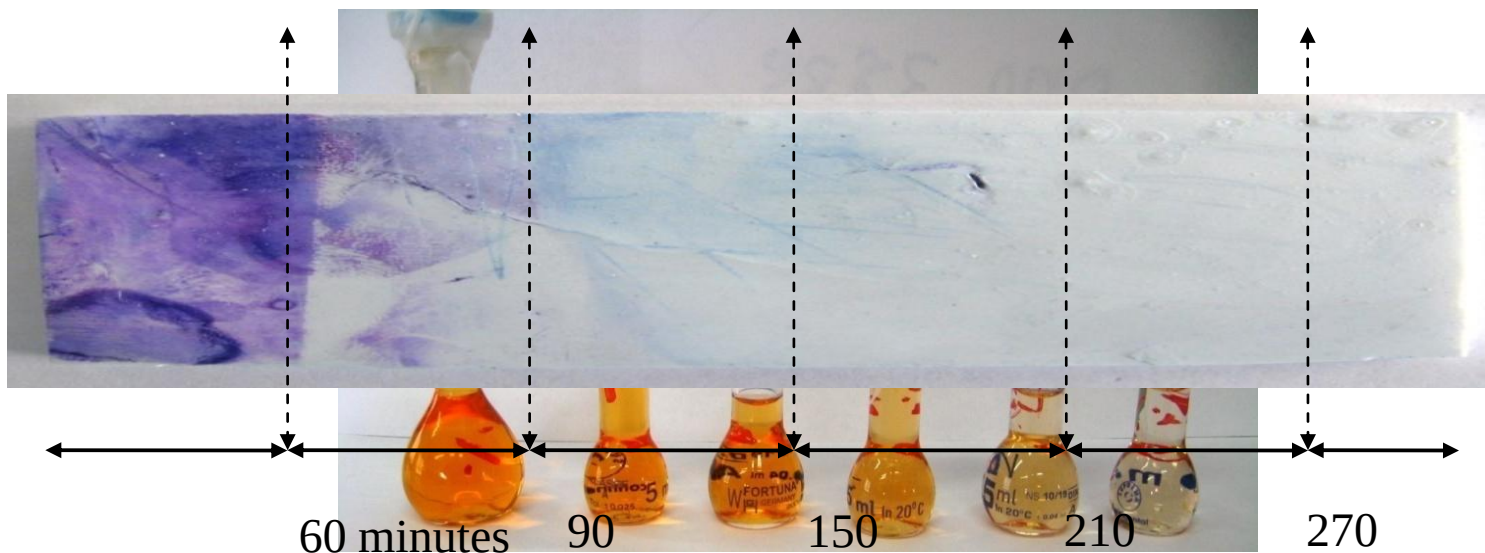
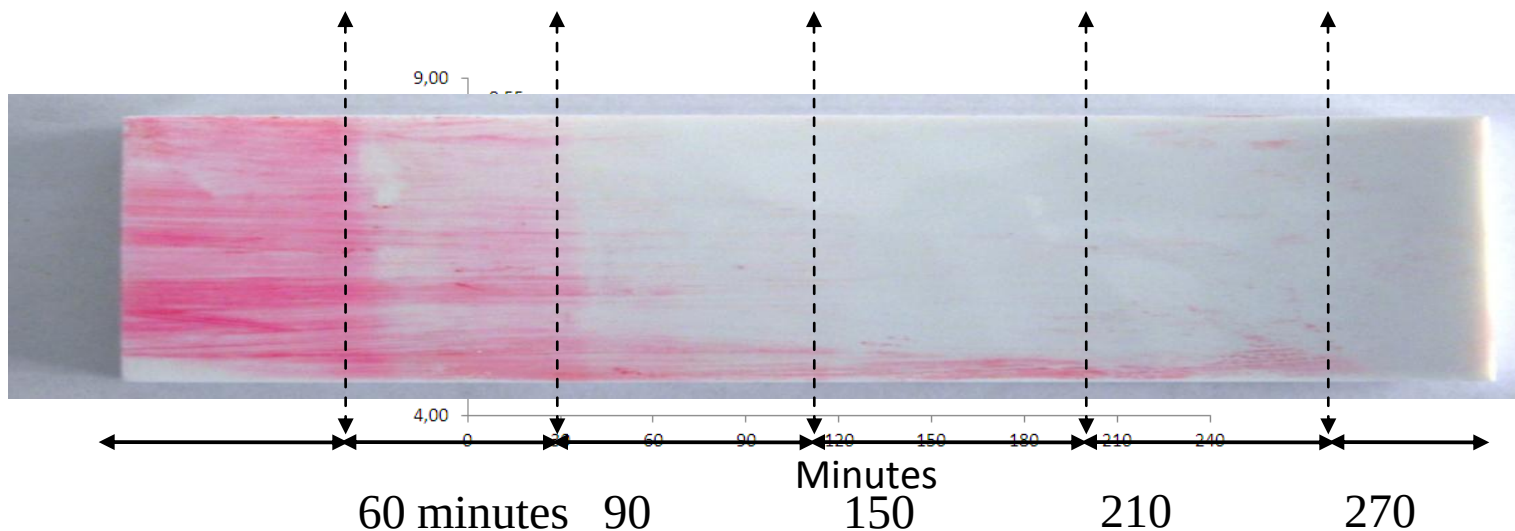
Methyl Blue

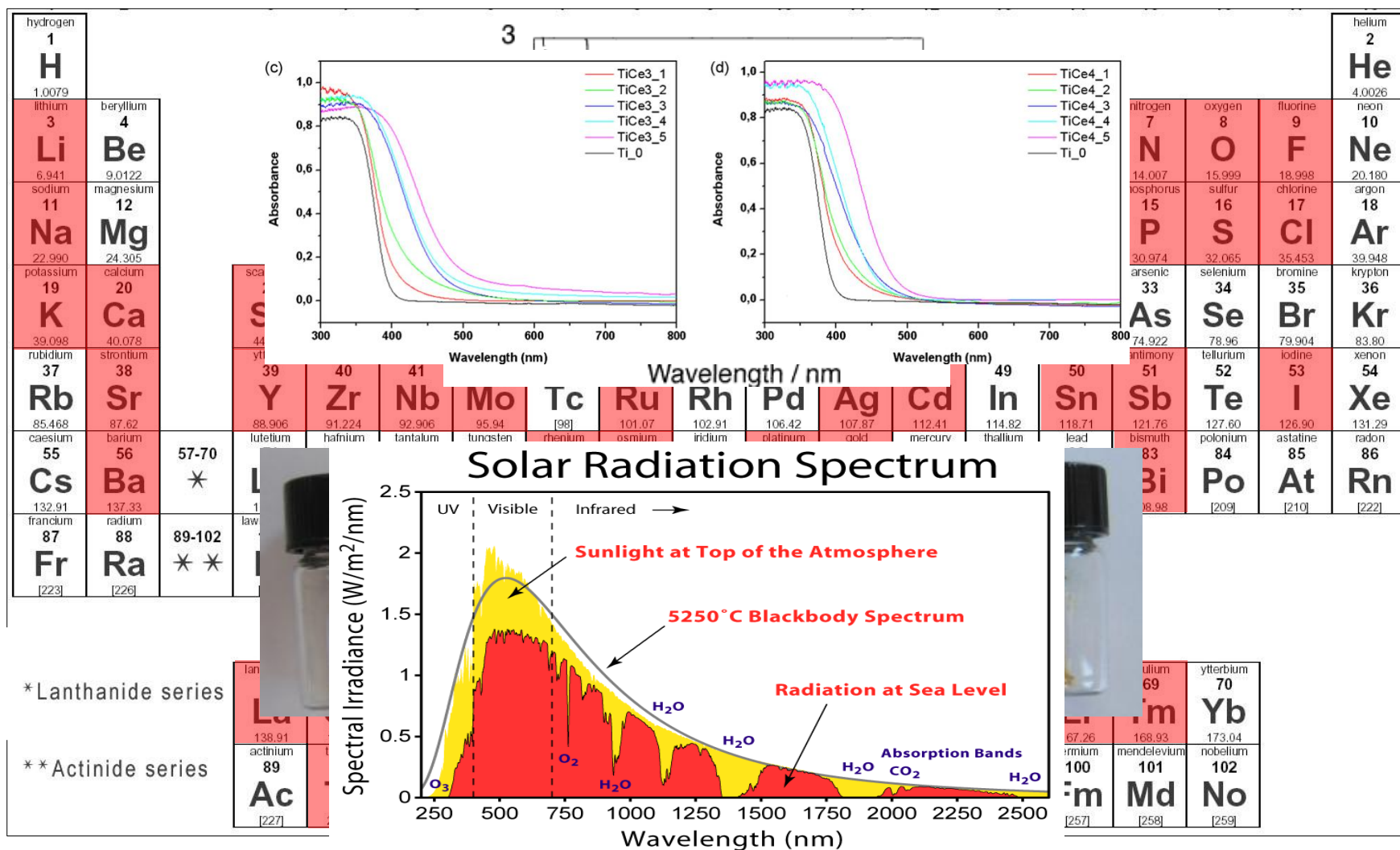


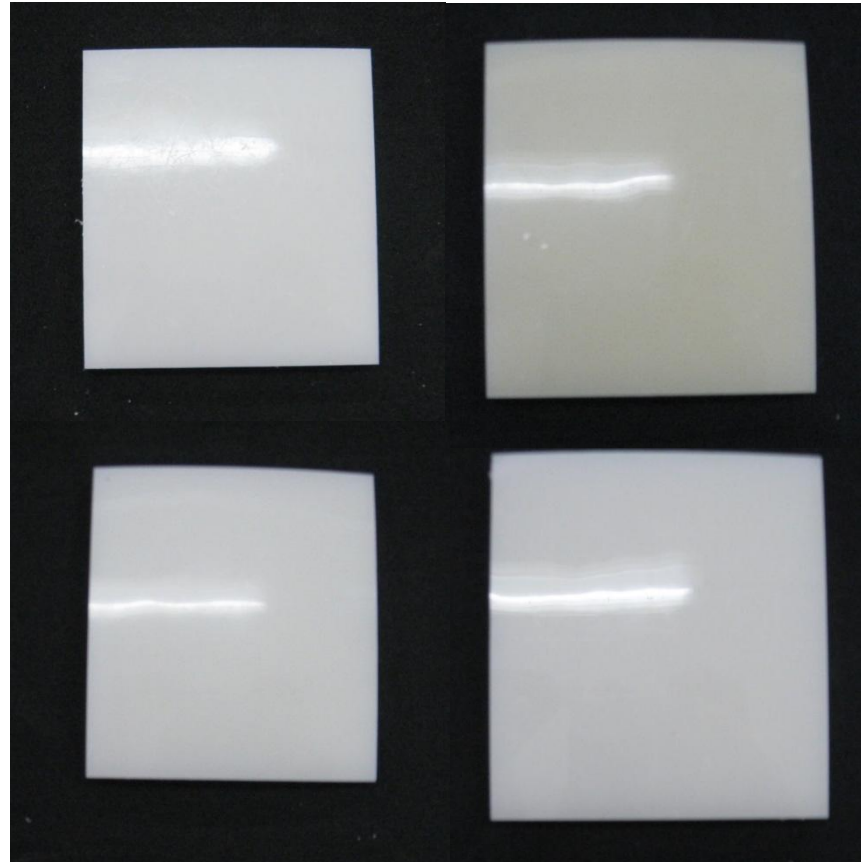
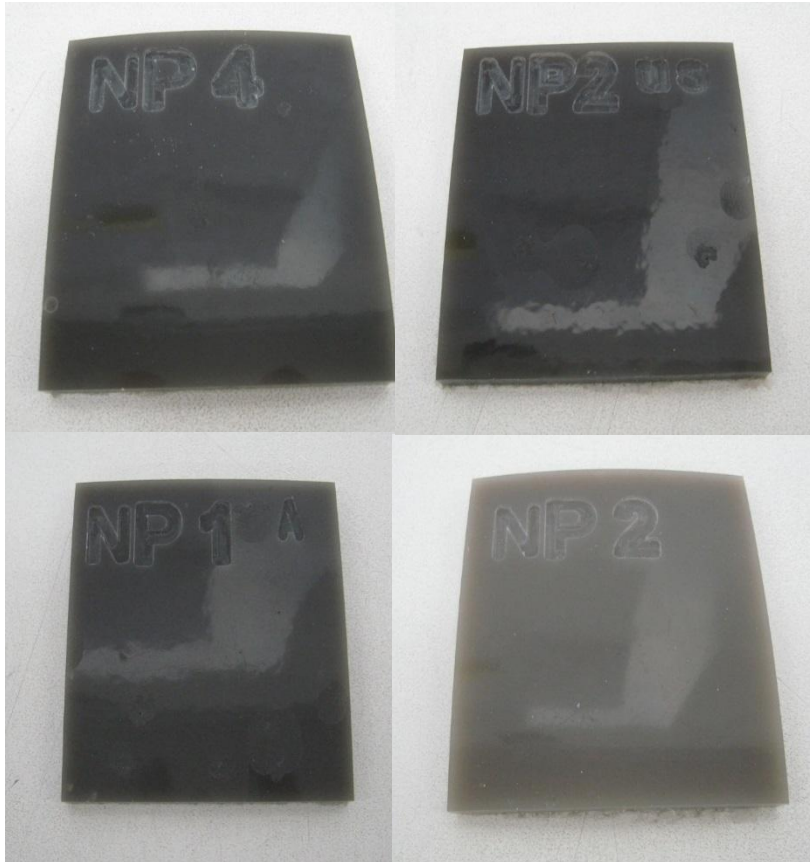
Methyl Orange



Methyl Red







Grazie per l'Attenzione!