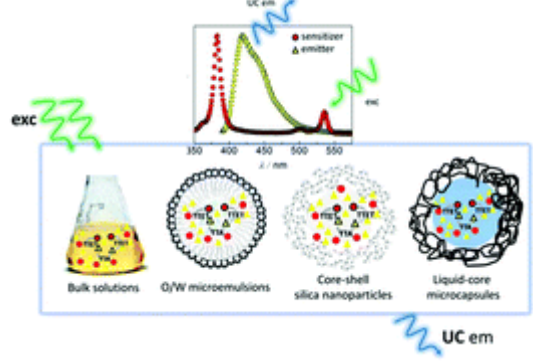
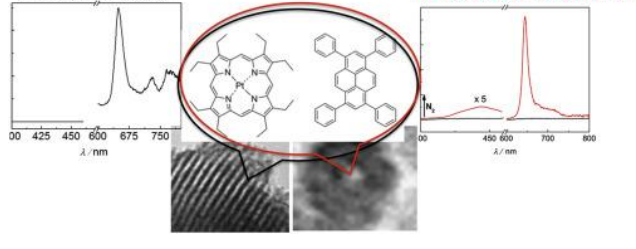
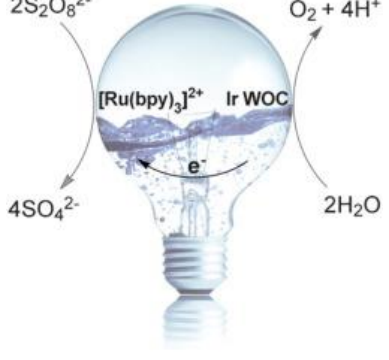
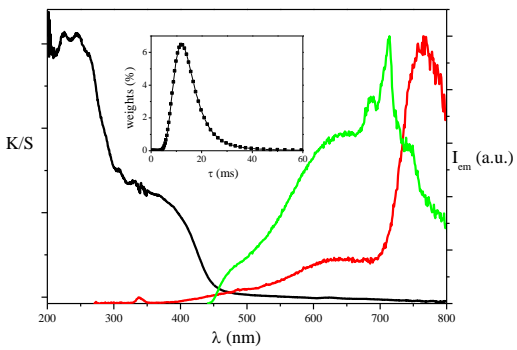
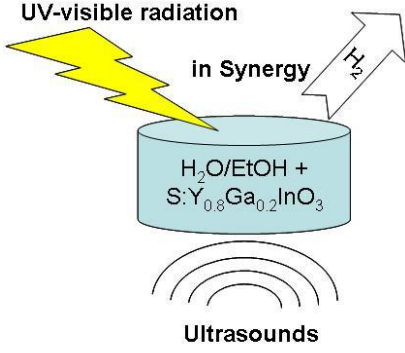
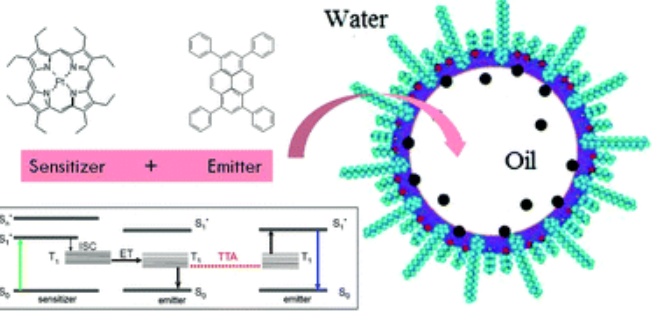
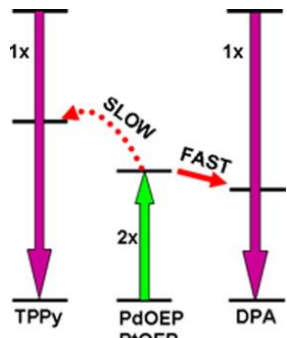
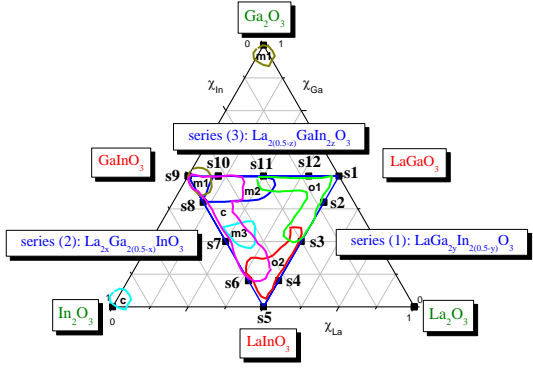
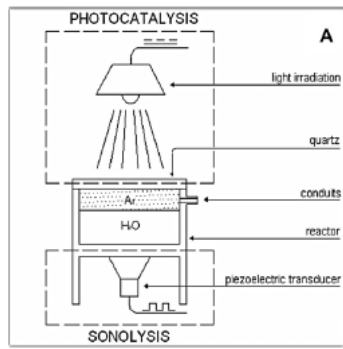


# SOLAR ENERGY

## Papers in Journals

<p>(9)</p>	<p>Loredana Latterini, Giuseppina Massaro, Marta Penconi, Pier Luigi Gentili, Claudio Roscini, Fausto Ortica.</p> <p><i>Molecular-based upconversion in homo/heterogeneous liquids and in micro/nanostructured solid materials.</i></p> <p>Dalton Trans. 2018, 47, 8557-8565.</p>	
<p>(8)</p>	<p>Giuseppina Massaro, Pier Luigi Gentili, Valeria Ambrogi, Morena Nocchetti, Fabio Marmottini, Fausto Ortica, Loredana Latterini.</p> <p><i>“Triplet-triplet annihilation based upconversion in silica matrices”</i></p> <p>Micropor. Mesopor. Mat., 2017, 246, 120-129.</p>	
<p>(7)</p>	<p>Ilaria Corbucci, Kevin Ellingwood, Lucia Fagiolari, Cristiano Zuccaccia, Fausto Elisei, Pier Luigi Gentili, Alceo Macchioni</p> <p><i>Photocatalytic water oxidation mediated by iridium complexes</i></p> <p>Catalysis Today, 2017, 290, 10-18</p>	
<p>(6)</p>	<p>Marta Penconi, Alessio Cesaretti, Fausto Ortica, Fausto Elisei, Pier Luigi Gentili</p> <p><i>Photoluminescence properties of La<sub>2-x</sub>Ga<sub>2y</sub>In<sub>2z</sub>O<sub>3</sub> solid solutions used as photocatalysts for water splitting and promising panchromatic emitters.</i></p> <p>Journal of Luminescence, 2016, 177, 314-324.</p>	

<p>(5)</p>	<p>Marta Penconi, Federico Rossi, Fausto Ortica, Fausto Elisei, Pier Luigi Gentili</p> <p><i>Hydrogen Production from Water by Photolysis, Sonolysis and Sonophotolysis with Solid Solutions of Rare Earth, Gallium and Indium Oxides as Heterogeneous Catalysts.</i></p> <p>Sustainability, 2015, 7, 9310-9325.</p>	
<p>(4)</p>	<p>M. Penconi, P. L. Gentili, G. Massaro, F. Elisei, F. Ortica</p> <p><i>A triplet-triplet annihilation based up-conversion process investigated in homogeneous solutions and oil-in-water microemulsions of a surfactant.</i></p> <p>Photochem. Photobiol. Sci. 13 (2014) 48-61.</p>	
<p>(3)</p>	<p>M. Penconi, F. Ortica, F. Elisei, P. L. Gentili</p> <p><i>New molecular Pairs for Low Power Non-Coherent Triplet-Triplet Annihilation Based Upconversion: Dependence on the Triplet Energies of Sensitizer and Emitter</i></p> <p>J. Luminescence, 135 (2013) 265-270.</p>	
<p>(2)</p>	<p>P. L. Gentili, M. Penconi, F. Costantino, P. Sassi, F. Ortica, F. Rossi, F. Elisei</p> <p><i>Structural and photophysical characterization of some <math>La_{2x}Ga_{2y}In_{2z}O_3</math> solid solutions, to be used as photocatalysts for <math>H_2</math> production from water/ethanol solutions.</i></p> <p>Solar Energy Materials &amp; Solar Cells, 94 (2010) 2265-2274.</p>	

(1)	<p>P. L. Gentili, M. Penconi, F. Ortica, F. Cotana, F. Rossi, F. Elisei</p> <p><i>Synergistic effects in hydrogen production Through water sonophotolysis catalyzed by new <math>La_{2x}Ga_{2y}In_{2(1-x-y)}O_3</math> solid solutions.</i></p> <p>Int. J. Hydrogen Energy, 34 (2009) 9042-9049.</p>	
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### Chapters in Books

(1)	<p>P. L. Gentili, F. Rossi, M. Penconi, F. Ortica, F. Elisei</p> <p><i>Hydrogen Production through sono-photolysis of water in the presence of solid solutions of metal oxides as photocatalysts</i></p> <p>Expert Commentary in “Hydrogen Production”, Editors D. Honnery, P. Moriarty, Nova Science Publishers, Inc. 2012, pag. 411-420.</p>	<p>Hydrogen is a promising energy carrier for the next future and, in order to favour a worldwide sustainable economy, it is necessary to produce it from an abundant material, such as water, and through a renewable energy source. Therefore, a compelling strategy entails splitting water by exploiting solar energy. Water does not absorb the frequencies of solar spectrum that have enough energy to fragment it, therefore the use of a photocatalyst is required. Since most of the solar radiation consists of visible wavelengths, coloured photocatalysts should be synthesized through a suitable band gap engineering. A way for reducing the waste of the longest wavelengths of solar radiation entails pursuing the up-conversion phenomenon. To increase the production of hydrogen from water splitting, it is useful to combine the action of light and heterogeneous photocatalyst with that of ultrasounds. In fact, the hybrid action of light and ultrasounds favours a remarkable synergistic effect.</p>
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### Communications at Congresses

(20)	<p>4<sup>th</sup> CARISMA meeting, Ljubljana, March 21<sup>st</sup> – 23<sup>rd</sup> 2016</p>	<p>I. Corbucci, K. Ellingwood, P. L. Gentili, A. Macchioni</p> <p><i>Iridium organometallic compounds for the photocatalytic oxidation of water.</i></p> <p>Proceedings, page 79.</p>
(19)	<p>10<sup>th</sup> International School of Organometallic Chemistry, Camerino, Italy, 5-9 September 2015</p>	<p>Ilaria Corbucci, Kevin Ellingwood, Pier Luigi Gentili, Alceo Macchioni</p> <p><i>Photocatalytic water oxidation with iridium catalysis under visible light</i></p>

		Proceedings, pag. 38
(18)	40 <sup>th</sup> “A. Corbella” International Summer School, June 14-18, 2015, Gargnano (BS, Italy).	Ilaria Corbucci, Pier Luigi Gentili, Alceo Macchioni. <i>“Photocatalytic Water Oxidation mediated by iridium Complexes”</i> Proceedings, ...
(17)	15° CIRIAF National Congress, 9-11 April 2015, Perugia (PG, Italy).	P. L. Gentili, M. Penconi, F. Rossi, F. Ortica, F. Elisei <i>“The World Energy Issue: a complex challenge. The contribution of photocatalytic water splitting”</i> Proceedings, Cod_021_pages 1-6.
(16)	26th International Conference on Photochemistry (ICP 2013). 21-26 July, 2013, Leuven (Belgium).	G. Massaro, P. L. Gentili, F. Ortica, L. Latterini <i>“Silica nanoparticles loaded with upconverting organic molecules and study of the effect of metal nanoparticles on radiative processes.”</i> Proceedings, pag. 309.
(15)	Italian Photochemistry Meeting 2012 & The Photochemistry of the Future – 100 years later.	M. Penconi, P. L. Gentili, F. Elisei, F. Ortica. <i>“Different strategies to improve hydrogen production from water by a heterogeneous photocatalyst.”</i> Proceedings pag. 44
(14)	XXIV IUPAC Symposium on Photochemistry, 15 – 20 July 2012, Coimbra (Portugal)	M. Penconi, P. L. Gentili, M. Oraziotti, I. Corbucci, F. Elisei, F. Ortica. <i>“TTA based up-conversion fluorescence in homogeneous and microheterogeneous media.”</i> Proceedings pag. 131.
(13)	X Congresso Nazionale di Chimica Supramolecolare, 25 – 28 September 2011, Perugia	M. Penconi, P. L. Gentili, F. Ortica, F. Elisei. <i>“Photon upconversion based on triplet-triplet annihilation in microheterogeneous systems.”</i> Proceedings page OC10
		M. Penconi, P. L. Gentili, F. Ortica, F. Rossi, F. Elisei

(12)	XXX Congresso Interregionale TUMA 2011, 30 June- 1 July, Perugia	<i>“Sistemi di produzione di idrogeno: sonofotolisi dell’acqua catalizzata da semiconduttori inorganici ed assistita da processi di up-conversion.”</i>  Proceedings page 40
(11)	International Conference of Hydrogen Production, 19 - 22 June 2011, Tessalonica (Greece)	F. Rossi, M. Filipponi, P. L. Gentili, M. Penconi, F. Ortica, F. Elisei  <i>“Hydrogen production through combined action of light and ultrasounds catalyzed by <math>\text{La}_{2x}\text{Ga}_{2y}\text{In}_{2z}\text{O}_3</math> solid solutions.”</i>
(10)	Convegno Nazionale di Fotochimica, Giardini Naxos (ME), 10 - 12 June 2011	M. Penconi, P. L. Gentili, F. Ortica, F. Rossi, F. Elisei  <i>“Sfruttamento dell’energia solare: sono fotolisi dell’acqua con produzione di idrogeno ed up conversion di radiazione elettromagnetica incoerente.”</i>  Proceedings page 017
(9)	XXIII IUPAC Symposium on Photochemistry, Ferrara  11 - 16 July 2010	P. L. Gentili, M. Penconi, F. Rossi, F. Ortica, F. Elisei  <i>“Photoproduction of hydrogen from water through heterogeneous photocatalysts”.</i>  Proceedings page 224.
(8)	2 <sup>nd</sup> France-Italy Symposium on Photosciences, Marseille  7 - 10 December 2009	F. Ortica, M. Penconi, P. L. Gentili, F. Costantino, P. Sassi, F. Cotana, F. Rossi, F. Elisei.  <i>“Structural and photophysical properties of solid solutions of metal oxides for hydrogen production through water sonophotolysis”.</i>  Proceedings page 84
(7)	Renewable Energy Day. The precariousness of the environment, Perugia 10 October 2009	P. L. Gentili  <i>Produzione di idrogeno dall’acqua per mezzo dell’energia solare.</i>  Proceedings pag. 6. <b>Invited speaker</b>
(6)	XXVIII Congresso Interregionale, TUMA 2009, Tirrenia (Pisa) 20 - 22 September 2009.	M. Penconi, P. L. Gentili, F. Ortica, F. Costantino, P. Sassi, F. Elisei  <i>“Proprietà fotofisiche e strutturali di soluzioni solide di ossidi metallici da utilizzare come fotocatalizzatori per la produzione d’idrogeno dall’acqua.”</i>  Proceedings page CO38

(5)	Workshop: Progetto FISR Vettore di Idrogeno. Rimini 26 - 27 August 2008	Elisei, P. L. Gentili, F. Ortica, A. Nicolini, M. Amantini <i>“Produzione di idrogeno mediante sonofotolisi catalizzata: impiego di soluzioni solide di ossidi di Lantanio, Indio e Gallio”.</i>  Proceedings pages 65-72.
(4)	8° Congresso Nazionale CIRIAF, Perugia (PG) 4 -5 April 2008	F. Elisei, F. Rossi, A. Nicolini, F. Ortica, P. L. Gentili, M. Giuliobello, M. Amantini <i>“Produzione di idrogeno dall’acqua mediante fotolisi assistita da fotocatalizzatori innovativi.”</i>  Proceedings pg. 329-333.
(3)	7° Congresso Nazionale CIRIAF, Perugia (PG) 30 - 31 March 2007	F. Elisei, P. L. Gentili, F. Ortica, F. Rossi, M. Urbani <i>“Produzione di idrogeno mediante sonofotolisi catalizzata: impiego di soluzioni solide di ossidi di Lantanio, Indio e Gallio”.</i>  Proceedings pg. 301-306.
(2)	Workshop on Innovative Systems for the production of Hydrogen from Renewable Energies, Terni 20 October 2006.	F. Elisei, F. Ortica, P. L. Gentili <i>“Sviluppo di un dispositivo per l’ottenimento di idrogeno mediante foto elettrolisi”.</i>  Proceedings pg. 59-65.
(1)	61° Congresso Nazionale dell’Associazione Termotecnica Italiana (ATI), Perugia 12-15 September 2006.	P. L. Gentili, F. Ortica, F. Elisei, M. Giuliobello <i>“Band-gap engineering of photo-catalysts for water splitting.”</i>  Proceedings pg. 679-683.