
LA RECERCA A L'EPSEM

ESCOLA POLITÈCNICA SUPERIOR D'ENGINYERIA DE MANRESA
OCTUBRE 2015



UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
Biblioteca del Campus de Manresa



UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
Escola Politècnica Superior d'Enginyeria
de Manresa

SUMARI

Introducció.....	3
Informe.....	4
1. Dades analitzades	4
2. Autors	4
3. Evolució del número de documents publicats cada any	5
4. Àrees de recerca	6
5. Col·laboradors	7
6. Tipus de document	9
7. Categorització i impacte de les revistes	10
8. Entitats finançadores	12
9. Documents	14

Introducció

La Biblioteca del Campus Universitari de Manresa presenta anualment, des de l'any 2010, l'**Observatori de la Recerca a la Catalunya Central**, un estudi bibliomètric que té per objectiu donar a conèixer la recerca que es duu a terme a la Catalunya Central i a quines institucions es desenvolupa. Pretén també ser un indicador de tendències que permeti fer un estudi de l'evolució de la recerca a institucions universitàries i de recerca

Aquest estudi sobre la recerca a l'EPSEM s'ha fet a partir de les dades extretes a la darrera edició de l'Observatori, que analitza el període de 5 anys 2010-2014.

L'abast de l'estudi i el procediment seguit es pot consultar al [portal de l'observatori](#), però en destaquem els aspectes importants a tenir en compte:

1. Tota la informació s'ha extret de la base de dades **Web of Science - Core Collection** (WoS)¹, producte de Thomson Reuters, que inclou els registres bibliogràfics del què es considera la producció tècnica i científica mundial de major rellevància. És la font d'informació més reconeguda internacionalment i especialment per l'Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) i la Comisión Nacional Evaluadora de la Actividad Investigadora (CNAI).
2. S'han recuperat exhaustivament les publicacions científiques disponibles a la base de dades WoS, publicades entre l'1 de gener 2010 i el 31 de desembre 2014, sense limitar per cap especialitat temàtica, només limitant geogràficament per la localització de l'adreça de la signatura dels autors.
3. Els resultats obtinguts de cada cerca s'han analitzat amb l'opció *Analyze results* que permet limitar-la per camps i ordenar els resultats per diferents criteris. De les dades obtingudes per cada ciutat, se n'han limitat el nombre de documents utilitzant el camp Organization i seleccionant, en cada cas, totes les diferents variables que apareixien.
4. Dins dels resultats de cada institució, s'han analitzat els resultats de nou amb l'opció *Analyze results* per poder treure les dades que es presenten en aquest informe.

Com remarquem en l'Observatori, la manca d'algun document científic en aquest informe pot ser deguda a diferents factors:

- La no incorporació a la base de dades WoS de la publicació, o bé, de la publicació en què és citat (el *citation report* només contempla citacions provinents de documents incorporats a WoS)
- La no inclusió de la menció de la ciutat a la signatura dels autors
- Errades en la indexació a la base de dades

Totes les dades obtingudes s'han treballat amb un full de càlcul, i aquí en presentem el resultat analitzat. També es pot consultar la [infografia](#) realitzada.

Per poder veure més exhaustivament la producció científica dels investigadors de l'EPSEM es pot consultar [FUTUR](#), el portal de la producció científica de la UPC.

¹ Web of Science Core Collection és la plataforma web amb la que es consulten les bases de dades de Thomson Reuters: Science Citation Index Expanded (SCI-EXPANDED) --1900-present ; Social Sciences Citation Index (SSCI) --1956-present ; Arts & Humanities Citation Index (A&HCI) --1975-present ; Conference Proceedings Citation Index--1990-present

Informe

1. Dades analitzades

51 investigadors
135 articles

2. Autors

Quadre amb els noms dels investigadors de l'EPSEM analitzats i el número de publicacions indexades durant el període analitzat (2010-2014).

AUTORS	DOCUMENTS
ROSSELL JM	19
GAMISANS X	18
FREIXAS J	17
PALACIOS-QUINONERO F	16
SANTOS S	15
RUBIO-MASSEGU J	13
FONT J	12
DORADO AD	12
BARCONS V	11
ALFONSO P	10
PALA-SCHONWALDER P	6
DEL AGUILA-LOPEZ F	6
BONET-DALMAU J	6
SANMIQUEL L	6
JORGE J	5
SOLE M	4
PUENTE MA	4
PARCERISA D	4
MOLINERO X	4
GIRALT-MAS R	4
GIMENEZ JM	4
FREIJO M	4
FORTUNY-SANTOS J	4
LAO C	4
RODRIGUEZ G	3
OLIVA J	3
VINTRO C	5
VENTURA E	2
SANAHUJA R	2

PONS M	2
MATA-PERELLO JM	2
GRAU D	2
GORCHS R	2
FERRERES E	2
ESCOBET T	2
ESCOBET A	2
DE LAS HERAS FXC	2
CUNILL J	2
BONSFILLS A	2
PENA-PITARCH E	2
BIOSCA-MUNTS J	1
BOFILL-ABELLO J	1
COBO E	1
CONANGLA L	1
GUIMERA J	1
MOLINA-HERNANDEZ MA	1
RIVERA J	1
TORRAS N	1
VICENTE-RODRIGO J	1
VILLAR-RIBERA R	1

3. Evolució del número de documents publicats cada any

Total de publicacions indexades i analitzades des de l'any 2008. Dades extretes de les diferents edicions de l'[Observatori de la recerca a la Catalunya Central](#)

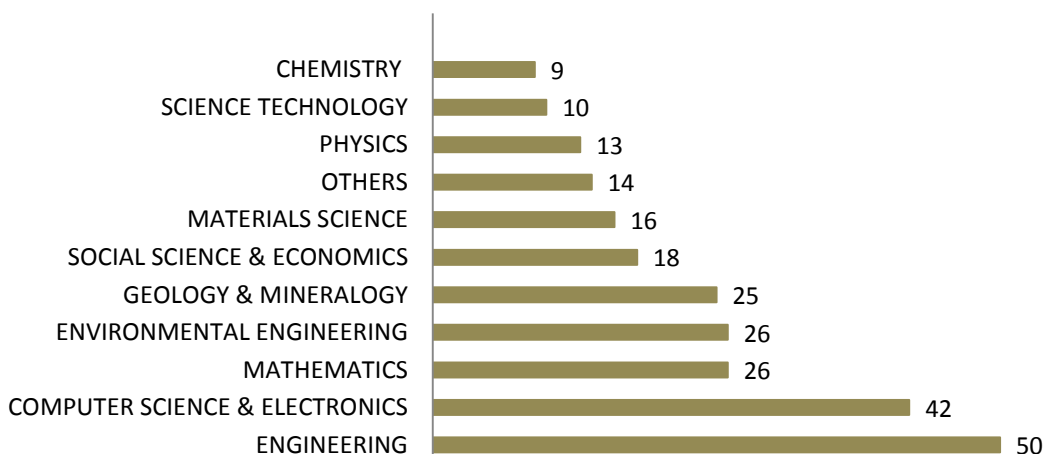


4. Àrees de recerca

L'anàlisi per categories temàtiques que fa WoS l'hem simplificat agrupant les *research areas* en 11 grups temàtics que s'adiuen a les línies de recerca de l'EPSEM. Cal tenir present que WoS permet classificar cada publicació amb més d'una matèria, i que cada grup que hem creat engloba un número diferent de categories temàtiques, tal i com es pot veure a la següent taula:

RESEARCH AREAS	DOCS	GRUPS TEMÀTICS	DOCS
BIOCHEMISTRY MOLECULAR BIOLOGY	1	CHEMISTRY	9
CHEMISTRY	8		
AUTOMATION CONTROL SYSTEMS	10	COMPUTER SCI & ELECTRONICS	42
COMPUTER SCIENCE	19		
OPERATIONS RES MANAGEMENT SCIENCE	13		
ENGINEERING	50	ENGINEERING	50
ENVIRONMENTAL SCIENCES ECOLOGY	17	ENVIRONMENTAL ENGINEERING	26
PLANT SCIENCES	1		
BIOTECHNOLOGY APPLIED MICROBIOLOGY	2		
PUBLIC ENVIRON OCCUPATIONAL HEALTH	3		
WATER RESOURCES	3		
GEOCHEMISTRY GEOPHYSICS	1	GEOLOGY & MINERALOGY	25
GEOLOGY	8		
METEOROLOGY ATMOSPHERIC SCIENCES	3		
MINERALOGY	5		
MINING MINERAL PROCESSING	5		
OCEANOGRAPHY	1		
PALEONTOLOGY	1		
PHYSICAL GEOGRAPHY	1		
MATERIALS SCIENCE	15	MATERIALS SCIENCE	16
METALLURGY METALLURGICAL ENG	1		
MATHEMATICAL COMPUTATIONAL BIOLOGY	1	MATHEMATICS	26
MATHEMATICAL METHODS IN SOCIAL SCI	6		
MATHEMATICS	19		
OTHERS	14	OTHERS	14
PHYSICS	13	PHYSICS	13
INSTRUMENTS INSTRUMENTATION	1	SCIENCE TECHNOLOGY	10
SCIENCE TECHNOLOGY OTHER TOPICS	8		
TRANSPORTATION	1		
BUSINESS ECONOMICS	11	SOCIAL SCIENCE & ECONOMICS	18
ANTHROPOLOGY	1		
EDUCATION EDUCATIONAL RESEARCH	3		
PSYCHOLOGY	1		
SOCIAL SCIENCES OTHER TOPICS	2		

Àrees de recerca



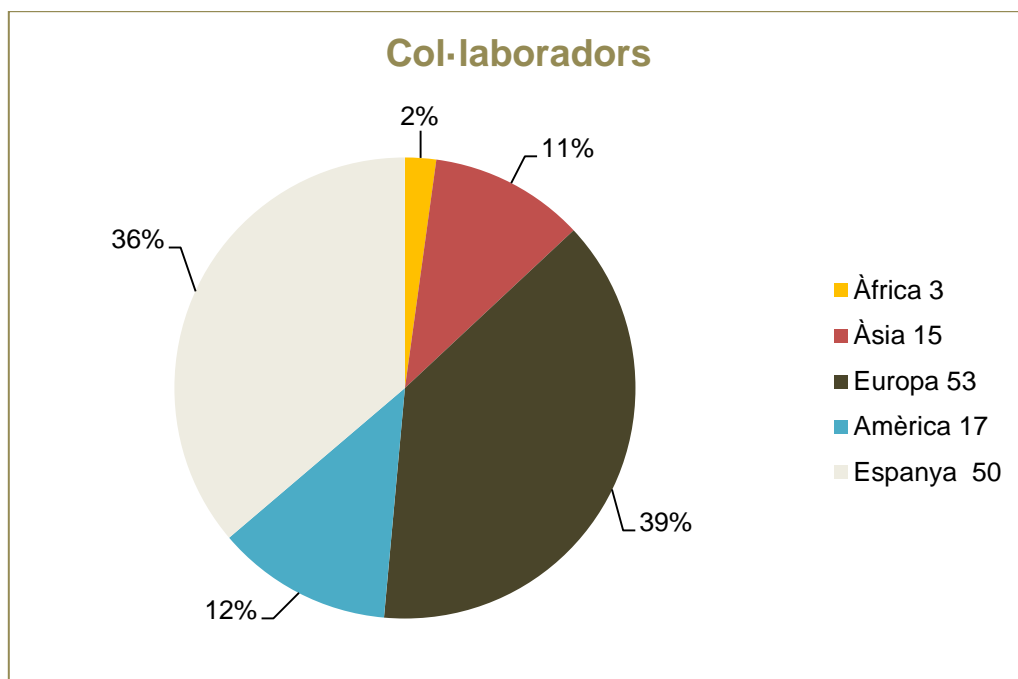
5. Col·laboradors

Llista de les institucions que consten a les coautories dels investigadors de l'EPSEM de les publicacions analitzades. S'ha fet també una representació geogràfica d'aquestes institucions.

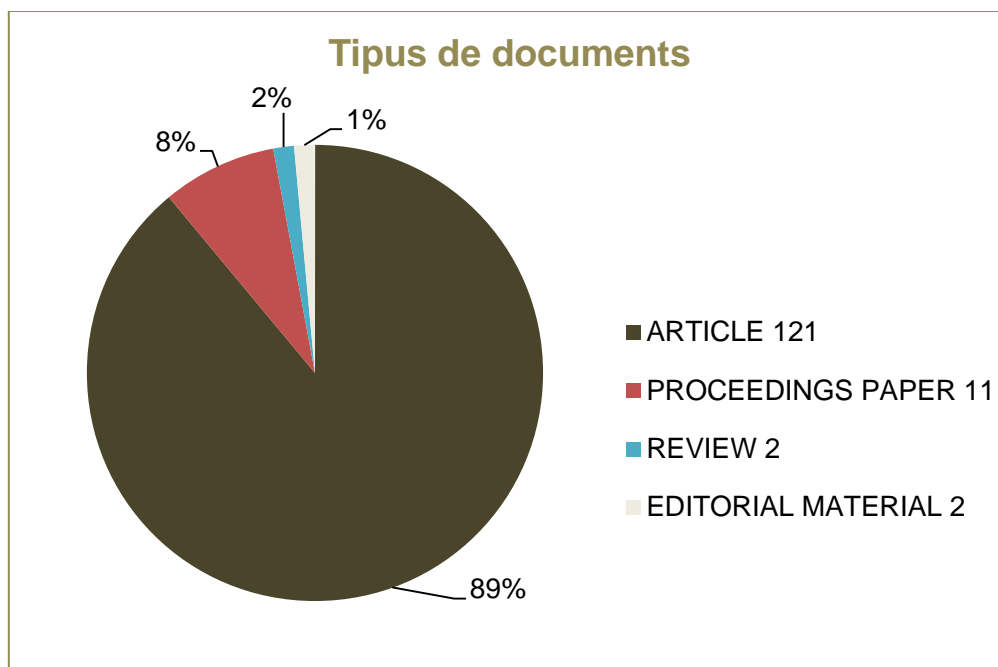
INSTITUCIÓ	PUBLICACIONS
UNIV AUTONOMA BARCELONA	17
UNIV of AGDER	13
MASDAR INST SCI TECHNOL	11
UNIV BARCELONA	8
UNIV LEEDS	7
ESFERA UAB-CEI	6
CSIC	6
UNIV NAACL AUTONOMA MEXICO	5
MIT - MASSACHUSSETS INST TECHNOL	4
UNIV BAYREUTH	3
UNIV YAOUNDE	2
UNIV SOUTHAMPTON	2
UNIV SANTIAGO DE COMPOSTELA	2
UNIV CERGY PONTOISE	2
DONETSK NATL UNIV	2
TEXAS TECH UNIV	2
CNRS	2
CIES ISCTE IUL	2
ASYLUM RESEARCH	2

Lista de les col·laboracions per països:

DOCS	CONTINENT	PAÍS	DOCS
103	EUROPA	SPAIN	50
		NORWAY	13
		ENGLAND	10
		FRANCE	7
		GERMANY	6
		UKRAINE	3
		PORTUGAL	2
		POLAND	2
		NETHERLANDS	2
		SWITZERLAND	1
		SWEDEN	1
		SCOTLAND	1
		RUSSIA	1
		ITALY	1
		FINLAND	1
DENMARK	1		
AUSTRIA	1		
17	AMÈRICA	USA	8
		CANADA	1
		MEXICO	5
		URUGUAY	1
		BOLIVIA	1
		ARGENTINA	1
15	ÀSIA	U ARAB EMIRATES	11
		PEOPLES R CHINA	2
		JAPAN	1
		IRAN	1
3	ÀFRICA	CAMEROON	2
		ANGOLA	1



6. Tipus de document



7. Categorització i impacte de les revistes

Segons els resultats obtinguts a partir del Journal Citation Report (JCR), les revistes en que els investigadors de l'EPSEM han publicat durant aquests 5 anys han estat:

TÍTOL DE LA REVISTA	ART	FI 2014	FI-5	QUARTIL 2014
NANOSCALE	2	7.394	7.762	Q1
JOURNAL OF PHYSICAL CHEMISTRY LETTERS	1	7.458	7.536	Q1
ACS APPLIED MATERIALS INTERFACES	1	6.723	6.813	Q1
WATER RESEARCH	1	5.528	6.279	Q1
JOURNAL OF PHYSICAL CHEMISTRY C	1	4.772	5.295	Q1
JOURNAL OF HAZARDOUS MATERIALS	6	4.529	5.277	Q1
CHEMICAL ENGINEERING JOURNAL	3	4.321	4.621	Q1
JOURNAL OF CLEANER PRODUCTION	1	3.844	4.167	Q1
ORE GEOLOGY REVIEWS	1	3.558	4.070	Q1
NANOTECHNOLOGY	2	3.821	3.885	Q1
CHEMOSPHERE	3	3.340	3.854	Q1
NEW JOURNAL OF PHYSICS	2	3.558	3.664	Q1
APPLIED PHYSICS LETTERS	2	3.302	3.569	Q1
WASTE MANAGEMENT	1	3.220	3.522	Q1
MARINE AND PETROLEUM GEOLOGY	1	2.639	2.957	Q1
DECISION SUPPORT SYSTEMS	3	2.313	2.933	Q1
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH	4	2.358	2.911	Q1
BEILSTEIN JOURNAL OF NANOTECHNOLOGY	1	2.670	2.903	Q1
JOURNAL OF PHYSICS D APPLIED PHYSICS	1	2.721	2.711	Q1
IEEE TRANS ON CIRCUITS & SYSTEMS I REGULAR PAPERS	2	2.403	2.634	Q1
BULLETIN OF VOLCANOLOGY	1	2.519	2.628	Q2
JOURNAL OF CHEMICAL TECHNOL AND BIOTECHNOLOGY	2	2.349	2.616	Q2
BOUNDARY LAYER METEOROLOGY	2	2.470	2.590	Q2
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE	1	2.207	2.503	Q1
PROCESS SAFETY AND ENVIRONMENTAL PROTECTION	1	2.551	2.441	Q1
COMPUTERS INDUSTRIAL ENGINEERING	2	1.783	2.412	Q2
IET CONTROL THEORY AND APPLICATIONS	1	2.048	2.337	Q1
JOURNAL OF APPLIED PHYSICS	1	2.183	2.276	Q2
ELECTRIC POWER SYSTEMS RESEARCH	2	1.749	2.234	Q2
APPLIED ERGONOMICS	1	2.023	2.143	Q1
MECHATRONICS	1	1.726	2.052	Q2
CLEAN TECHNOLOGIES AND ENVIRONMENTAL POLICY	1	1.934	2.052	Q2
EPL	1	2.095	2.024	Q2
DYNAMICS OF ATMOSPHERES AND OCEANS	1	1.600	1.992	Q2
GEOLOGICA ACTA	1	1.367	1.821	Q2
MINERALS ENGINEERING	1	1.597	1.751	Q2

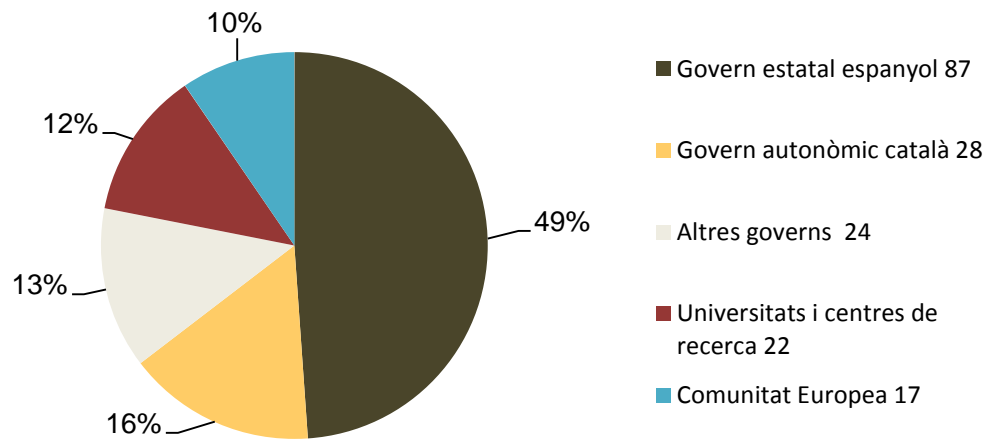
APPLIED MATHEMATICS AND COMPUTATION	2	1.551	1.686	Q1
JOURNAL OF SOUTH AMERICAN EARTH SCIENCES	1	1.367	1.678	Q3
INT JOURNAL FOR NUMERICAL METHODS IN BIOMED ENG	1	2.052	1.655	Q1
JOURNAL OF INTELLIGENT FUZZY SYSTEMS	1	1.812	1.607	Q2
ENVIRONMENTAL TECHNOLOGY	2	1.560	1.591	Q3
PHYTOCHEMISTRY LETTERS	1	1.450	1.549	Q2
IEEE TRANS. ON CIRCUITS & SYSTEMS II EXPRESS BRIEFS	2	1.234	1.546	Q3
OPTIMIZATION METHODS SOFTWARE	1	1.624	1.544	Q1
INDUSTRIAL MANAGEMENT DATA SYSTEMS	1	1.226	1.544	Q2
ANNALS OF OPERATIONS RESEARCH	2	1.217	1.501	Q2
CANADIAN MINERALOGIST	1	1.181	1.317	Q3
JOURNAL OF ENVIRON SCIENCE AND HEALTH PART A	1	1.164	1.239	Q3
GEODIVERSITAS	1	0.947	1.214	Q3
WATER SCIENCE AND TECHNOLOGY	1	1.106	1.208	Q3
MODELING IDENTIFICATION AND CONTROL	3	0.778	1.063	Q4
RANDOM STRUCTURES ALGORITHMS	1	0.924	0.991	Q1
TOP	1	0.831	0.943	Q4
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION	1	0.296	0.933	Q4
MATHEMATICAL METHODS OF OPERATIONS RESEARCH	1	0.625	0.889	Q3
ZEITSCHRIFT FUR GEOMORPHOLOGIE	1	0.734	0.882	Q4
DISCRETE APPLIED MATHEMATICS	1	0.802	0.862	Q3
MATHEMATICAL PROBLEMS IN ENGINEERING	4	0.762	0.798	Q3
GROUPS GEOMETRY AND DYNAMICS	1	0.625	0.758	Q2
INTERNATIONAL JOURNAL OF MATERIALS RESEARCH	1	0.639	0.731	Q3
INTERNATIONAL JOURNAL OF GAME THEORY	2	0.579	0.626	Q4
JOURNAL OF THE AMERICAN LEATHER CHEMISTS ASSOC	2	0.495	0.589	Q3
RAIRO OPERATIONS RESEARCH	1	0.405	0.505	Q4
MATHEMATICAL SOCIAL SCIENCES	2	0.462	0.495	Q4
JOURNAL OF SOC OF LEATHER TECHNOL AND CHEMISTS	3	0.264	0.408	Q4
BOLETIN DE LA SOCIEDAD ESP DE CERAMICA Y VIDRIO	1	0.290	0.364	Q4
JOURNAL OF MINING SCIENCE	1	0.239	0.282	Q4
DYNA	2	0.179	0.167	Q4
TECNOLOGIA Y CIENCIAS DEL AGUA	1	0.047	0.063	Q4

8. Entitats finançadores

La majoria de publicacions son resultat de projectes de recerca finançats per una o vàries institucions. A continuació es mostres les entitats que han finançat alguns dels projectes als que pertanyen les publicacions analitzades:

TIPUS D'AGÈNCIA	DOCS	ENTITATS	DOCS
GOVERN ESTATAL	87	Gobierno de España	5
		Ministerio de economia y competitividad	27
		Comisión interministerial de ciencia y tecnología	17
		Dirección general de investigación	3
		Ministerio de educación y ciencia	11
		Consejo nacional de investigaciones científicas y técnicas	1
		Ministerio de ciencia e innovación	17
		Fundacion nacional de ciencias	1
		Ministerio de industria, turismo y comercio	1
		Ministerio de ciencia e innovación. Instituto de ciencias matemáticas	2
		IMPULSA	1
		Agencia de promoción científica y técnica ANPCYT	1
GOVERN AUTONÒMIC	28	Generalitat de Catalunya	25
		Departament d'Educació i Universitat	1
		Departament d'universitat, Recerca i Societat de la Informació	1
		AGAUR Generalitat de Catalunya	1
ALTRES GOVERNS	24	Norwegian center of offshore wind energy norcowe under res council of norway	11
		Xunta de Galicia	2
		Biotechnology and Biological Sciences Research	2
		Agence nationale de la recherche	1
		DOE office of ARPA E	1
		Research council of Norway	1
		Polish national budget funds	1
		Office national des forets	1
		Norway through the EEA financial mechanism	1
		Malaysian government under program skim latihan akademik bumiputra SLAB	1
		Iceland Liechtenstein and Norway through the EEA financial mechanism	1
		Iceland Liechtenstein	1
UNIVERSITATS/CENTRES DE RECERCA	22	Hugh e mckinstry fund	1
		French spanish program picasso	1
		Barcelona graduate school of economics	4
		Asylum research corporation	2
		Universitat politecnica de catalunya	4
		UNAM	1
		Texas tech university	1
		Society of economic geologists	1
		Secyt universidad nacional de rio cuarto	1
		Masdar institute	1
		King Fahd university of petroleum and minerals in Dhahran Saudi Arabia	1
		Iberpotash chair in mining sustainability (UPC)	1
		Edward e Whitacre jr college of engineering	1
		PAPIIT UNAM	2
COMUNITAT EUROPEA	17	European regional development fund ERDF EC	12
		European social fund	1
		European Commission	3
		Esf program Automatha	1

Entitats finançadores



9. Documents

A continuació es detallen totes les publicacions analitzades. Per facilitar-ne més informació s'han enllaçat al portal [Futur](#).

Alcelay, I.; Al Omar, A.; Prado, J. M. [Characterization of hot flow behaviour and deformation stability of medium carbon microalloyed steel using artificial neural networks and dynamic material model](#). *International journal of materials research* [en línia]. August 2014, vol. 105, no. 8, p. 743-754. eISSN 2044-5326. Disponible a: <<http://doi.org/10.3139/146.111077>>.

Alfonso, P.; Canet, C.; Melgarejo, J. C.; Mata-Perello, J. M.; Fallick, A. E. [Stable isotope geochemistry of the Ulldemolins Pb-Zn-Cu deposit \(SW Catalan Coastal Ranges, Spain\)](#). *Geologica acta* [en línia]. June 2012, vol. 10, no. 2, p. 1145-157. eISSN 1696-5728. Disponible a: <<http://doi.org/10.1344/105.000001707>>.

Alfonso, P.; Torró, L.; Mesa, C.; Parcerisa, D.; Mata, J. M.; González, E.; Canet,; García, M. [Mineralogical characterisation of the Tizapa ore deposit, Mexico](#). A: *Let's talk ore deposits: proceedings of the Eleventh Biennial SGA Meeting, Antofagasta, Chile, 26-29 September 2011*. Barra, F., ed. Antofagasta: Ediciones Universidad Católica del Norte, 2011, p. 781-783.

Alonso, J. M.; Freixas, J.; Molinero, X. [Computation of several power indices by generating functions](#). *Applied mathematics and computation* [en línia]. 15 December 2012, vol. 219, no. 8, p. 3395-3402. eISSN 0096-3003. Disponible a: <<http://doi.org/10.1016/j.amc.2012.10.021>>.

Alonso, J. M.; Freixas, J. [A new power index based on minimal winning coalitions without any surplus](#). *Decision support systems* [en línia]. April 2010, vol. 49, no.1, p. 70-76. eISSN 0167-9236. Disponible a: <<http://doi.org/10.1016/j.dss.2010.01.003>>.

Amadei, C. A.; Yang, R.; Chiesa, M.; Gleason, K. K.; Santos, S. [Revealing amphiphilic nanodomains of anti-biofouling polymer coatings](#). *ACS applied materials & interfaces* [en línia]. 2014, vol. 6, no. 7, p. 4705-4712. eISSN 1944-8244. Disponible a: <<http://doi.org/10.1021/am405159f>>.

Amer, R.; Giménez, J. M.; Magaña, A. [Accessibility measures to nodes of directed graphs using solutions for generalized cooperative games](#). *Mathematical methods of operations research* [en línia]. February 2012, vol. 75, no. 1, p. 105-134. eISSN 1432-2994. Disponible a: <<http://doi.org/10.1007/s00186-011-0378-x>>.

Amer, R.; Giménez, J. M.; Magaña, A. [Reconstructing a simple game from a uniparametric family of allocations](#). *Top* [en línia]. October 2013, vol. 21, no. 3, p. 505-523. eISSN 1863-8279. Disponible a: <<http://doi.org/10.1007/s11750-011-0194-8>>.

Arancibia, J. R. H.; Alfonso, P.; Garcia, M.; Martínez, S.; Parcerisa, D.; Canet, C.; Romero, F. M. Obtención de vidrio a partir de residus de la mineria del estaño en Bolivia. *Boletín de la Sociedad Española de Cerámica y Vidrio* [en línia]. Mayo-junio 2013, vol. 52, no. 3, p. 143-150. eISSN 0366-3175. Disponible a: <<http://doi.org/10.3989/cyv.192013>>.

Arbulo, P. de; Fortuny, J.; Vintró, C.; Basáñez, A. Application of time-driven activity-based costing in the production of automobile components. *Dyna* [en línia]. 2013, vol. 8, no. 2, p. 234-240. eISSN 1989-1490. Disponible a: <<http://doi.org/10.6036/5105>>.

Bacardit, A.; Borràs, M. D.; Soler, J.; Herrero, V.; Jorge, J.; Ollé, L. [Behavior of leather as a protective heat barrier and fire resistant material](#). *Journal of the American Leather Chemists Association* [en

línia]. 2010, vol. 105, no. 2, p. 51-61. eISSN 0002-9726. Disponible a: <<http://hdl.handle.net/2117/6554>>.

Bacardit, A.; Cobos, M.; Font, J.; Jorge, J.; Ollé, L. Study of the effect of temperature, relative humidity and uv radiation on wet-white leather ageing. *Journal of the American Leather Chemists Association* [en línia]. 2010, vol. 105, no. 10, p. 334-341. eISSN 0002-9726. Disponible a: <<http://hdl.handle.net/2117/10034>>.

Bacardit, A.; Morera, J. M.; Shendrik, A.; Jorge, J.; Ollé, L. Humic acid derivatives as tanning and retanning agents. *Journal of the Society of Leather Technologists and Chemists* [en línia]. 2012, vol. 96, no.2, p. 64-67. eISSN 0144-0322. Disponible a: <<http://hdl.handle.net/2117/15766>>.

Bacardit, A.; Shendrik, A.; Combalia, F.; Jorge, J.; Ollé, L. Study of cross-linking reactions on butadiene binders in aqueous finishing. *Journal of the Society of Leather Technologists and Chemists* [en línia]. 2010, vol. 94, no. 6, p. 248-252. eISSN 0144-0322. Disponible a: <<http://hdl.handle.net/2117/10705>>.

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