

Cinetica Chimica	
Corso di Laurea Ing. Chimica (Supplenza)	2002-2003 2003-2004 2004-2005 2005-2006 2006-2007 2007-2008 2008-2009
Reattori Chimici Non ideali	
Corso di Laurea Specialistica Ing. Chimica (Supplenza)	2009-2010
Ingegneria delle Reazioni Chimiche	
Corso di Laurea Ing. Chimica (Supplenza)	2010-2011
Bioingegneria Industriale	
Corso di Laurea Biotecnologie Industriali (Supplenza)	2011-2012 2012-2013 2013-2014 2014-2015 2015-2016 2016-2017
Reattori Chimici e Biologici	
Corso di Laurea Magistrale Ing. Chimica (Supplenza)	2011-2012 2012-2013 2013-2014 2014-2015 2016-2017 2017-2018 2018-2019 2019-2020 2020-2021
Applicazioni di BioIngegneria Chimica	
Corso di Laurea Ing. Biomedica (Supplenza)	2017-2018 2018-2019 2019-2020 2020-2021

E. Esperienze di Lavoro:

Contrattista di Ricerca (ex art. 37 L.R. 2/94)	Gen. 1997 – Gen. 1998
Dip. Ing. Chimica	Feb. 1998 – Mag. 1998
Università degli Studi di Cagliari	

J. Lavori presentati a Conferenze e Seminari:

Si veda l'elenco allegato.

K. Attività di referee per le seguenti riviste:

Chemical Engineering Science
Industrial and Engineering Chemistry Research
Environmental Pollution
Environmental Science and Technology
AIChE Journal
Cryobiology
PlosONE
Scientific Reports
Powder Technology
Biomicrofluidics
Life

L. Premi/riconoscimenti, Affiliazioni e altri titoli:

Borsa di Dottorato di Ricerca (Università di Cagliari – Sede consorziata all'Univ. di Pisa)	1995-1998
Membro CINSA (Centro Interdipartimentale di Ingegneria e Scienze Ambientali) Univ. di Cagliari	1998-2009
INSTM (consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali)	1998-presente
Vincitore del finanziamento dell'Univ. di Cagliari per giovani ricercatori	1999
Vincitore Borsa di Studio CNR (Per Laureati da usufruirsi presso istituzioni scientifiche estere, BANDO N. 203.22)	2003
Membro di Commissioni di esami per le Lauree in Ing. Chimica di Univ. di Cagliari	2003-presente
Membro di GRICU (Gruppo di Ingegneria Chimica dell'Università)	2003-presente
Membro commissione concorsi Dottorato Ing. e Scienze Amb. Univ. di Cagliari (ciclo XXIII-XXVI)	2007-2009
Membro del Comitato Organizzatore di SHS – 2005 <i>VIII International Symposium on Self-propagating High-temperature Synthesis</i> (Cagliari, 21-24 Giugno 2005)	2005

Membro di Commissioni di esami per le Lauree in Ing. Ambientale di Univ. di Cagliari	2005-2009
Iscritto all'Ordine Nazionale degli Ingegneri della Provincia di Cagliari (CIV/AMB, IND, INFO)	2005-2015
Membro del collegio dei docenti Dottorato Internazionalizzato di Ing. e Scienze Amb. Univ. di Cagliari (ciclo XXIII-XXV)	2007-2009
Vincitore del finanziamento dell'Univ. di Cagliari per giovani ricercatori	2008
Membro del collegio dei docenti Dottorato in Ing. Biomedica. Univ. di Cagliari (ciclo XXVI-XXVIII)	2010- 2012
Membro aggiuntivo del Comitato Scientifico (reviewer) 11th International Conference on Chemical & Process Engineering (ICheaP-11) (Milano 2-5 Giugno 2013).	2013
Membro del collegio dei docenti Dottorato in Scienze e Tecnologie per l'Innovazione. Univ. di Cagliari (ciclo XXIX-XXXIV)	2013-2018
Vincitore Borsa di Studio DAAD (Deutscher Akademischer Austausch Dienst) (Research Visit to the Federal Republic of Germany)	2010
Membro del Comitato Scientifico 5th PBM (Population Balance Modelling) Conference Indian Institute of Science, Bangalore, September 11-13, 2013	2013
Vincitore premio di Univ. Cagliari per idoneità ottenuta dal progetto Prin 2012 presentato nell'ambito di bandi di ricerca di rilevanza nazionale (10 kE).	2014
Membro aggiuntivo del Comitato Scientifico (reviewer) 12th International Conference on Chemical & Process Engineering (ICheaP-12) (Milano 19-22 Maggio 2015).	2015
Membro del Comitato Scientifico 6th PBM (Population Balance Modelling) Conference Ghent University, Ghent, Belgium, May 7-9, 2018	2018

Membro valutatore REPRISE
(MIUR) per Progetti REsearch For
INnovation (REFIN - 2019) 2019

Membro valutatore REPRISE
(MIUR) per Progetti Fondo Integrativo
Speciale per la Ricerca (FISR - 2020) 2020

Membro GEV09
(Anvur – VQR 2015-2019) 2020

M. Responsabile e coordinatore di progetti di ricerca finanziati:

Progetto di Ricerca del Programma Master & Back 2010-2012
POR Sardegna FSE 2007-2013
(Crioconservazione di cellule mesenchimali da cordone ombelicale:
determinazione delle condizioni operative ottime in funzione dei fenomeni
chimico-fisici coinvolti)
Assegno di Ricerca di S. Fadda 24 mesi

Fondazione Banco di Sardegna, Italia 2010-2011
(Crioconservazione di cellule staminali da cordone ombelicale)
30 kEur – 12 mesi

Fondazione Banco di Sardegna, Italia 2011-2012
(Crioconservazione di cellule staminali da cordone ombelicale)
27 kEur – 18 mesi

Progetto di Ricerca di Base, Legge 7 (Bando 2012) 2013-2016
Regione Autonoma della Sardegna, Italia
(Analisi sperimentale e modellistica della crioconservazione di cellule
staminali cordonali)
300 kEur – 36 months

Progetto di Ricerca Europeo H2020 (Bando 2015) 2017-
Unione Europea, GA No 734434 – Marie Skłodowska - Curie Actions,
Research and Innovation Staff Exchange RISE
(Drynet, Setting an interdisciplinary/sectorial/international research network to
explore dry storage as an alternative strategy for cells/germplasm biobanking)
99 kEur – 48 months

N. Partecipazione a progetti di ricerca finanziati:

PROGEMISA SpA, Italia (responsabile G. Cao) 1996-1997
(Utilizzo di zeoliti naturali per applicazioni ambientali)

Agenzia Spaziale Italiana (responsabile G. Cao) (SHS, gravità, applicazioni spaziali)	1998-2000
Consorzio 21, Italia (responsabile G. Cao) (Sintesi per combustione attivata da campo elettrico di materiali innovativi)	1999-2001
Consorzio 21, Italia (responsabile G. Cao) (Adsorbenti naturali disponibili in Sardegna per applicazioni ambientali)	1999-2001
MURST, Progetto Giovani Ricercatori (8%) (responsabile G. Cao) (Impiego di zeoliti naturali per applicazioni ambientali)	2000
PROGEMISA SpA, Italia (responsabile G. Cao) (Zeoliti naturali disponibili in Sardegna per applicazioni ambientali)	2000-2001
Consorzio INCA, Progetto 1 (responsabile G. Cao) (Riciclo di biomasse, scarti agricoli e materiali polimerici attraverso la pirolisi, per l'ottenimento di carboni attivi)	2001-2002
Consorzio INCA, Progetto 6 (responsabile G. Cao) (Bonifica di suoli contaminati mediante tecnologie in situ ed ex situ).	2001-2002
PRIN, 2002 (responsabile G. Cao) (Sintesi di compositi nano strutturati)	2002-2005
PON Ricerca, CINSA (responsabile G. Cao) (Nuove tecnologie per la bonifica ed il ripristino ambientale di siti contaminati).	2003-2006
MIUR D.M. 1015 04/10/2001, (responsabile R. Orrù) progetto #36 , PROMEA (Sintesi e densificazione di materiali innovativi nanostrutturati).	2003-2004
MIUR 60%	2003-presente
FIRB, INSTM (responsabile G. Cao) (Nanotecnologie per la realizzazione di microcomponenti per il rilievo delle immissioni dei motori a combustione interna e della qualità dell'aria).	2006-2009
FP6 - NMP (responsabile G. Cao) (NAMAMET, processing of NANostructured MAterials through MEtastable Transformations)	2004-2007
CyberSar, PON MIUR (responsabile G. Cao) (<i>Cyberinfrastructure</i> per la ricerca scientifica e tecnologica in Sardegna).	2006-2009
PRIN, 2006 (responsabile G. Cao) (Crescita di tessuti cartilaginei ingegnerizzati)	2007-2009
GRIDA3, PON MIUR (responsabile G. Cao)	2007-2009

(Gestione di Risorse conDivise per Analisi di dati e Applicazioni Ambientali).

SVIFASTA, PON MIUR (responsabile G. Cao) 2007-2010
(Sviluppo di piattaforme tecnologiche innovative per l'individuazione di composti potenzialmente efficaci nella terapia oncologica, neuropsichiatria e cardiovascolare).

FP7 – NMP (responsabile F. Delogu) 2011-2014
(RADINTERFACES, Multiscale Modelling and Materials by Design of interface-controlled Radiation Damage in Crystalline Materials)

O. Partecipazione a SPIN-OFF:

Partecipazione Societaria (9%) a IM srl (Innovative Materials srl)
Spin-Off di Università degli Studi di Cagliari
03095970921 - Registro Imprese di Cagliari
Sede legale Sestu, V.le Monastir km 7,300 Cagliari

Partecipazione Societaria (10%) a DNM srl (Dense Nanostructured Materials srl)
Spin-Off di Università degli Studi di Cagliari
03255640926 - Registro Imprese di Cagliari
Sede legale Sestu, V.le Monastir km 7,300 Cagliari

P. Tesi di Laurea e di Dottorato (supervisione, relatore o co-relatore):

Laurea Carlo Broi (1997 – Supervisione, G. Cao relatore):
Effetto della concentrazione del catalizzatore e del promotore nell'ossidazione catalitica del *p*-xylene in fase liquida.

Laurea Nicola Lai (1998 - Supervisione, G. Cao relatore):
Simulazione Modellistica del reattore di ammonossidazione del proilene.

Laurea Antonio Mario Locci (2000 - Supervisione, G. Cao relatore):
Sintesi di materiali innovativi per combustione autopropagante ad alta temperatura: analisi sperimentale e modellistica.

Laurea Stefano Perra (2000 - Supervisione, G. Cao e R. Orrù relatori):
Utilizzo di zeoliti naturali disponibili in Sardegna per la rimozione di specie inquinanti.

Laurea Anna Mameli (2000 – Supervisione, G. Cao e R. Orrù relatori):
Rimozione di specie inquinanti attraverso l'impiego di zeoliti naturali disponibili in Sardegna.

Dottorato Nicola Lai (2001 - G. Cao e **A. Cincotti** relatori):
Sull'impiego di zeoliti naturali disponibili in Sardegna: analisi sperimentale e modellistica.

Laurea Carlo Patteri (2001 - Supervisione, G. Cao relatore):

Analisi sperimentale e modellistica sulle applicazioni delle tecniche di lisciviazione per il recupero di suoli contaminati da attività minerarie dismesse.

Laurea Claudia Pitzalis (2001 - Supervisione, G. Cao e G. Padalino relatori):
Caratterizzazione di zeoliti naturali disponibili in Sardegna per applicazioni ambientali.

Laurea Caterina Frau (2002 - G. Cao e **A. Cincotti** relatori):
Ossidazione catalitica in fase liquida di *m*-xylene ad acido isoftalico.

Dottorato Anna Rita Mamei (2003 - Supervisione, G. Cao e G. Padalino relatori):
Materiali adsorbenti a basso costo per barriere permeabili nella bonifica di siti contaminati.

Dottorato Sarah Fadda (2006 – Supervisione, M. Masi e G. Cao relatori):
Applicazioni innovative dei bilanci di popolazione.

Laurea magistrale Andrea Alberton (2013 - **A. Cincotti** e E. Sanjust relatori):
Trattamento biologico di acque reflue mediante *Rhodotorula Glutinis* per la rimozione del carico organico e dell'azoto.

Laurea specialistica Paolo Vinci (2013 - **A. Cincotti** relatore):
Modeling of wall coated microreactors: the case of methanol steam reforming.

Dottorato Elisa Casula (2014 – S. Enzo e **A. Cincotti** relatori):
Physico-chemical phenomena involved in cryo-preservation of mesenchymal stem cells from umbilical cord blood: experiments and modeling.

Laurea magistrale Alessandro Martis (2015 - **A. Cincotti** e Nicola Lai relatori):
Characterization of submaximal exercise cardiorespiratory response in adolescents.

Laurea triennale Davide Peddio (2015 - **A. Cincotti** relatore):
Analisi cinetica della denitrificazione mediante *Rhodotorula Glutinis*.

Laurea VO Manila Carboni (2015 - **A. Cincotti** relatore):
Crescita di lieviti ambientali e miscele batteriche su terreni sintetici contaminati da fenantrene.

Laurea triennale Stefano Pani (2015 - **A. Cincotti** relatore):
Analisi modellistica della "solution injury" durante la crioconservazione di una sospensione cellulare

Laurea magistrale Gabriele Traversari (2017 - **A. Cincotti** relatore):
Crioconservazione di hMSCs da UCB: analisi sperimentale e modellistica del contatto con DMSO

Laurea magistrale Davide Ambu (2017 - **A. Cincotti** co-relatore):
Simulazione modellistica del processo di *Chemical Vapour Infiltration*

Laurea magistrale Massimiliano Musu (2018 - **A. Cincotti**): Analisi modellistica del processo di “drying” per il “bio-banking” di cellule e gameti umani

Laurea triennale Fabiana Contini (2019 - **A. Cincotti** relatore): Microfluidica: applicazioni in medicina rigenerativa e diagnostica

Laurea magistrale Davide Peddio (2019 - **A. Cincotti**): Crescita microbica del fungo “*Rhodotorula glutinis*”: determinazione della cinetica di denitrificazione

Laurea triennale Benedetta Frongia (2020 - **A. Cincotti** relatore): Cellule staminali: potenzialità e limiti nell’ambito della medicina rigenerativa e dell’ingegneria tissutale.

Dottorato Gabriele Traversari (2017 –**A. Cincotti** relatore):
Analysis of multi-phase systems relevant to bioengineering and materials science.

ELENCO DELLE PUBBLICAZIONI
INDICIZZATE SU ISI WEB OF SCIENCE & SCOPUS

Alberto Cincotti

- 1 **A. Cincotti**, R. Orrù, A. Broi, G. Cao, "Effect of catalyst concentration and simulation of precipitation processes on the liquid-phase catalytic oxidation of *p*-xylene to terephthalic acid", *Chemical Engineering Science*, **52**, 4205-4213, Oxford, U.K., 1997.
- 2 G. Carta, **A. Cincotti**, "Film model approximation for non-linear adsorption and diffusion in spherical particles", *Chemical Engineering Science*, **53**, 3483-3488, Oxford, U.K., 1998.
- 3 G. Carta, **A. Cincotti**, G. Cao, "Film model approximation for particle-diffusion-controlled binary ion exchange", *Separation Science and Technology*, **34**, 1-15, New York, USA, 1999.
- 4 **A. Cincotti**, M. Murru, G. Cao, B. Marongiu, F. Masia, M. Sannia, "Liquid-Liquid Equilibria of Hydrocarbons with N-Formylmorpholine", *Journal of Chemical Engineering Data*, **44**, 480-483, Washington, USA, 1999.
- 5 R. Orrù, M. Sannia, **A. Cincotti**, G. Cao, "Treatment and Recycling of Zinc Hydrometallurgical Wastes by Self-propagating Reactions", *Chemical Engineering Science*, **54**, 3053-3061, Oxford, U.K., 1999. I.F. 1.218
- 6 **A. Cincotti**, R. Orrù, G. Cao, "Kinetics and Related Engineering Aspects of Catalytic Liquid-Phase Oxidation of *P*-Xylene to Terephthalic Acid", *Cat. Today*, **52**, 331-347, Amsterdam, NL, 1999. I.F. 1.723
- 7 M. Pisu, **A. Cincotti**, G. Cao, F. Pepe, "Simulation of the effect of mass transfer limitations in complex gas-liquid reactions", *Studies in Surface Science and Catalysis*, **133**, 471-476, 2001.

- 8 **A. Cincotti**, R. Orrù, M. Pisu, G. Cao, “Self-propagating reactions for environmental protection: reactor engineering aspects”, *Ind. Eng. Chem. Res.*, **40**, 5291-5299, Washington DC, USA, 2001. I.F. 1.351.
- 9 R. Orrù, **A. Cincotti**, G. Cao, Z. A. Munir, “Mechanistic Investigation of Electric Field-Activated Self-Propagating Reactions: Experimental and Modeling”, *Chem. Eng. Sci.*, **56**, 683-692, Oxford, U.K., 2001. I.F. 1.547
- 10 **A. Cincotti**, G. Murgia, R. Orrù, G. Cao, “On the modeling of the copper block front quenching technique to investigate solid-solid self-propagating high-temperature reactions”, *Ind. Eng. Chem. Res.*, **40**, 3451-3458, Washington DC, USA, 2001. I.F. 1.351
- 11 **A. Cincotti**, N. Lai, R. Orrù, G. Cao, “Sardinian Natural Clinoptilolites for Heavy Metals and Ammonium Removal: Experimental and Modeling”, *Chem. Eng. J.*, **84/3**, 275-282, Lausanne, Netherlands, 2001. I.F. 0.847
- 12 M. Pisu, N. Lai, **A. Cincotti**, F. Delogu, G. Cao, “A simulation model for the growth of engineered cartilage on polymeric scaffolds”, *International Journal of Chemical Reactor Engineering*, **1**, A38, 2003. I.F. 0.75
- 13 R. Orrù, **A. Cincotti**, A. Concas, G. Cao, “Development of processes for environmental protection based on self-propagating reactions”, *Environmental Science and Pollution Research*, <http://dx.doi.org/10.1065/espr2001.12.104.9>, **6**, 385-389, Landsberg, Deutschland, 2003. I.F. 1.216
- 14 **A. Cincotti**, R. Licheri, A. M. Locci, R. Orrù, G. Cao, “A review on combustion synthesis of novel materials: recent experimental and modeling results”, *J. Chemical Technology and Biotechnology*, **78**, 2-3, 122-127, Hoboken, NJ, USA, 2003. I.F. 0.979
- 15 A M. Pisu, **A. Cincotti**, G. Cao, F. Pepe “Prediction of uncatalyzed calcium bisulfite oxidation under operating conditions relevant to wet flue gas

- desulphurization plants”, *Icheme Transactions, Part A, Chemical Engineering Research and Design*, **82**, A7, 927-932, 2004.
- 16 A. Concas, C. Patteri, **A. Cincotti**, G. Cao, “Metal contamination from abandoned mining sites: experimental investigation of possible remediation techniques”, *Land Contamination and Reclamation*, **12**, 1, 9-20, London, UK, 2004.
- 17 A. Mameli, **A. Cincotti**, N. Lai, C. Crisafulli, S. Scirè, G. Cao, “Adsorption of organic compounds onto activated carbons from recycled vegetables biomass”, *Annali di Chimica*, Società Chimica Italiana (Ed.), Roma, Italy, **94**, 547-554, 2004.
- 18 M. Pisu, N. Lai, **A. Cincotti**, A. Concas, G. Cao, “Modeling of engineered cartilage growth in rotating bioreactors”, *Chem. Eng. Sci.*, **59**, 5035-5040, Oxford, U.K., 2004. I.F. 1.665
- 19 A. M. Locci, **A. Cincotti**, F. Delogu, R. Orrù, G. Cao, “Advanced modelling of self-propagating high-temperature synthesis: the case of the Ti-C system”, *Chem. Eng. Sci.*, **59**, 5121-5128, Oxford, U.K., 2004. I.F. 1.665.
- 20 M. Porcu, R. Orrù, **A. Cincotti**, G. Cao, “Self-propagating reactions for environmental protection: treatment of wastes containing asbestos”, *Ind. Eng. Chem. Res.*, **44**, 85-91, Washington DC, USA, 2005. I.F. 1.504
- 21 A. M. Locci, **A. Cincotti**, F. Delogu, R. Orrù, G. Cao, “Combustion Synthesis of metal carbides: Part I. Model Development.”, *J. Mat. Res.*, **20**, 5, 1257-1268, Warrendale, USA, 2005. I.F. 2.104
- 22 A. M. Locci, **A. Cincotti**, F. Delogu, R. Orrù, G. Cao, “Combustion Synthesis of metal carbides: Part II. Numerical simulation and comparison with experimental data.”, *J. Mat. Res.*, **20**, 5, 1269-1277, Warrendale, USA, 2005. I.F. 2.104

- 23 **A. Cincotti**, A. Mamei, A. M. Locci, R. Orrù, G. Cao, “Heavy metals uptake by Sardinian natural zeolites: experimental and modeling”, *Ind. Eng. Chem. Res.*, **45**, 1074-1084, Washington DC, USA, 2006. I.F. 1.518
- 24 A. M. Locci, R. Licheri, R. Orrù, **A. Cincotti**, G. Cao, “Synthesis/Sintering of Dense Carbides-, Borides- and Perovskites- Based Materials by SPS”, *Ceramic Transactions*, **194**, 173-188, Hoboken (NJ), USA, 2006. In: Pulse Electric Current Synthesis and Processing of Materials. vol. 194, p. 173-188, Maui, HI; United States, 11 September 2005 through 16 September 2005
- 25 A. M. Locci, R. Licheri, R. Orrù, **A. Cincotti**, G. Cao, J. De Wilde, F. Lemoisson, L. Froyen, I. A. Beloki, A. E. Sytshev, A. S. Rogachev e D. J. Jarvis, “Low-Gravity Combustion Synthesis: Theoretical Analysis of Experimental Evidences”, *AIChE J.*, **52**, 3744-3761, Hoboken (NJ), USA, 2006. I.F. 2.153.
- 26 **A. Cincotti**, A. M. Locci, R. Orrù, G. Cao, “Modelling of SPS Apparatus: Temperature, Current and Strain Distribution with No Powders”, *AIChE J.*, **53**, 703-719, Hoboken (NJ), USA, 2007. I.F. 1.607
- 27 R. Orrù, R. Licheri, A. M. Locci, C. Musa, **A. Cincotti**, G. Cao, “One step synthesis and deification of intermetalllics by Spark Plasma sintering [Sintesi e simultanea densificazione di intermetallici mediante sinterizzazione in corrente pulsata]”, *La Metallurgia Italiana*, **99**, 27-34, 2007.
- 28 A.M. Locci, R. Licheri, R. Orrù, **A. Cincotti**, G. Cao, “Mechanical and Electric Current Activation of Solid-Solid Reactions for the Synthesis of Fully Dense Advanced Materials”, *Chemical Engineering Science*, **62**, 4885-4890, Oxford, U.K., 2007. I.F. 1.775.
- 29 M. Pisu, A. Concas, S. Fadda, **A. Cincotti**, G. Cao, “A simulation model for stem cells differentiation into specialized cells of non-connective tissues”, *Computational Biology and Chemistry*, <http://dx.doi.org/10.1016/j.compbiolchem.2008.06.001>, **32**, 338-344, 2008. I.F. 1.65

- 30 S. Fadda, **A. Cincotti**, G. Cao, “Modelling breakage and reagglomeration during fine dry grinding in ball milling devices”, *Chemical Engineering Transactions*, **17**, 687-692, 2009.
- 31 S. Fadda, **A. Cincotti**, G. Cao, “A population balance approach for the description of water osmosis and intracellular ice formation during cryopreservation”, *Chemical Engineering Transactions*, **17**, 1125-1130, 2009.
- 32 L. Mancuso, M. I. Liuzzo, S. Fadda, M. Pisu, A. Concas , **A. Cincotti**, G. Cao, “Experimental analysis and modeling of in vitro mesenchymal stem cells proliferation”, *Chemical Engineering Transactions*, **17**, 1059-1064, 2009.
- 33 R. Orrù, R. Licheri, A.M. Locci, **A. Cincotti**, G. Cao “Consolidation/Synthesis of Materials by Electric Current Activated/Assisted Sintering”, *Mater. Sci. Eng. R*, **63**, 4-6, 127-287, 2009. I.F. 14.4
- 34 S. Fadda, **A. Cincotti**, A. Concas, M. Pisu, G. Cao, “Modelling breakage and reagglomeration during fine dry grinding in ball milling devices”, *Powder Technology*, **194**, 3, 207-216, 2009. I.F. 1.13.
- 35 L. Mancuso, M. I. Liuzzo, S. Fadda, M. Pisu, **A. Cincotti**, M. Arras, E. Desogus, F. Piras, G. Piga, La Nasa G., A. Concas , G. Cao, “Experimental analysis and modeling of in vitro mesenchymal stem cells proliferation”, *Cell Proliferation*, **42**, 602-616, 2009. I.F. 2.917
- 36 L. Mancuso, M. I. Liuzzo, S. Fadda, **A. Cincotti**, M. Pisu, A. Concas, G. Cao, “Experimental Analysis And Modelling Of Bone Marrow Mesenchymal Stem Cells Proliferation”, *Chemical Engineering Science*, **65**, 562-568, Oxford, U.K., 2010. I.F. 2.379
- 37 L. Mancuso, M.I. Liuzzo, S. Fadda, M. Pisu, **A. Cincotti**, M. Arras, G. La Nasa, A. Concas, and G. Cao. “*In vitro* ovine articular chondrocytes proliferation: experiments and modelling”, *Cell Proliferation*, **43**, 310-320, 2010. I.F. 2.742

- 38 S. Fadda, **A. Cincotti**, G. Cao. "The effect of cell size distribution during the cooling stage of cryopreservation without CPA", *AIChE J.*, **56**, 2173-2185, 2010. I.F. 2.03
- 39 A. M. Locci, **A. Cincotti**, S. Todde, R. Orrù, G. Cao "A methodology to investigate the intrinsic effect of the pulsed electric current during the spark plasma sintering of electrically conductive powders", *Science and Technology of Advanced Materials*. **11**, 045005, 2010. I.F. 3.223.
- 40 A. Cincotti, A.M. Locci, R. Orrù, G. Cao, "Simulation of contact resistances influence on temperature distribution during SPS experiments", *Ceramic Transactions*, **212**, 3-17, 2010.
- 41 S. Fadda, **A. Cincotti**, G. Cao, "A population balance model to investigate the effect of microgravity on the kinetics of *in vitro* cell proliferation", *Chemical Engineering Transactions*, **24**, 1003-1008, 2011.
- 42 S. Fadda, **A. Cincotti**, G. Cao. "Rationalizing the equilibration and cooling stages of cryopreservation: the effect of cell size distribution", *AIChE J.*, **57**, 1075-1095, 2011. I.F. 2.261
- 43 S. Fadda, H. Briesen, **A. Cincotti**. "The effect of EIF dynamics on the cryopreservation process of a size distributed cell population ", *Cryobiology*, **62**, 218-231, 2011. I.F. 2.062.
- 44 S. Fadda, **A. Cincotti**, G. Cao. "A novel population balance model to investigate the kinetics of *in vitro* cell proliferation: Part I. Model development", *Biotechnology and Bioengineering*, **109**, 3, 772-781, 2012. I.F. 3.946
- 45 S. Fadda, **A. Cincotti**, G. Cao. "A novel population balance model to investigate the kinetics of *in vitro* cell proliferation: Part II. Numerical solution, parameters' determination and model outcomes", *Biotechnology and Bioengineering*, **109**, 3, 782-796, 2012. I.F. 3.946

- 46 E. Casula, G. P. Asuni, V. Sogos, **A. Cincotti**, “hMSCs from UCB: isolation, characterization and determination of osmotic properties for optimal cryopreservation”, *Chemical Engineering Transactions*, 43, 265-270, 2015.
- 47 A. Usai, D. Peddio, **A. Cincotti**, “Kinetics of nitrate- and nitrite-removal by *Rhodotorula Glutinis*: determination of a reaction mechanism”, *Chemical Engineering Transactions*, 49, 457-462, 2016.
- 48 G. Pia, **A. Cincotti**, F. Delogu, “Thermally and catalytically induced coarsening of nanoporous Au”, *Materials Letters*, 183, 114-116, 2016.
- 49 A. Idda, D. Bebbere, G. Corona, L. Masala, E. Casula, **A. Cincotti**, S. Ledda, “Insights on cryopreserved sheep fibroblasts by cryomicroscopy and gene expression analysis”, *Biopreservation and Biobanking*, 15 (4), 310-320, 2017.
- 50 E. Casula, GP. Asuni, V. Sogos, S. Fadda, F. Delogu, **A. Cincotti**, “Osmotic behaviour of human mesenchymal stem cells: Implications for cryopreservation”, *PLoS ONE* 12(9): e0184180. Doi: [10.1371/journal.pone.0184180](https://doi.org/10.1371/journal.pone.0184180), 2017
- 51 E. Casula, G. G. Traversari, S. Fadda, O.V. Klymenko, C. Kontoravdi, **A. Cincotti**, “Modelling the Osmotic Behaviour of Human Mesenchymal Stem Cells”, *Biochemical Engineering Journal*, 2019, 107296, Doi: [10.1016/j.bej.2019.107296](https://doi.org/10.1016/j.bej.2019.107296).
- 52 G. Pia, G. Traversari, **A. Cincotti**, F. Delogu, “A mapping approach to pattern formation in the early stages of mechanical alloying”, *Philosophical Magazine Letters*, 99(5), 192-198, 2019. Doi:[10.1080/09500839.2019.1653503](https://doi.org/10.1080/09500839.2019.1653503)
- 53 L. Casnedi, **A. Cincotti**, M. Cappai, F. Delogu, G. Pia, “Porosity effects on water vapour permeability in earthen materials: Experimental evidence and modelling description”, *Journal of Building Engineering*, 100987, 2020. Doi: doi.org/10.1016/j.jobe.2019.100987
- 54 A. Kumar, R. Baccoli, A. Fais, **A. Cincotti**, L. Pilia, G. Gatto, “Substitution effects on the optoelectronic properties of Coumarin derivatives”, *Applied Sciences*, 2020, 10, 144 Doi: [10.3390/app10010144](https://doi.org/10.3390/app10010144).

- 55 A. Kumar, **A. Cincotti**, S. Aparicio, “A Theoretical Study on Trehalose + Water Mixtures for Dry Preservation Purposes”, *Molecules*, 2020, 25, 1435; doi:10.3390/molecules25061435.
- 56 A. Kumar, **A. Cincotti**, S. Aparicio, “Insights into the Interaction Between Lipid Bilayers and Trehalose Aqueous Solutions”, *Journal of Molecular Liquids*, 2020, 314, 113639; doi:[10.1016/j.molliq.2020.113639](https://doi.org/10.1016/j.molliq.2020.113639)
- 57 **A. Cincotti**, G. Traversari, G. Pia, F. Delogu, “Milling dynamics and propagation of mechanically activated self-sustaining reactions”, *Advances in Materials Science and Engineering*, 2020; 8032985, doi: 10.1155/2020/8032985
- 58 A. Porcheddu, **A. Cincotti**, F. Delogu, “Kinetics of MgH₂ formation by ball milling”, *International Journal of Hydrogen Energy*, 2021, 46(1), 967-973; doi:10.1016/j.ijhydene.2020.09.251
- 59 G. Traversari, A. Porcheddu; G. Pia, F. Delogu, **A. Cincotti**, “Coupling of mixing and reaction in mechanochemical transformations”, *Physical Chemistry Chemical Physics*, 2021, 23, 229-245, doi.org/10.1039/D0CP05647B
- 60 G. Traversari, **A. Cincotti**, “Insights into the model of non-perfect osmometer cells for cryopreservation: a parametric sweep analysis”, in press *Cryobiology*, 2020, doi.org/10.1016/j.cryobiol.2020.11.013
- 61 F. Torre, M. Carta, P. Barra, **A. Cincotti**, A. Porcheddu, F. Delogu, “Mechanochemical ignition of self-propagating reactions in Zn-S powder mixtures”, *Metallurgical and Materials Transactions B*, 2021, <https://doi.org/10.1007/s11663-021-02056-2>.
- 62 J. L. Trenzado, Y. Rodríguez, A. Gutiérrez, **A. Cincotti**, S. Aparicio, “Experimental and Molecular Modeling Study on the Binary Mixtures of

[EMIM][BF₄] and [EMIM][TFSI] Ionic Liquids”, submitted to *Journal of Molecular Liquids*, 2020.

63 M. Atilhan, **A. Cincotti**, S. Aparicio, “Nanoscopic characterization of type II porous liquid and its use for CO₂ absorption from molecular simulation”, accepted for publication in *Journal of Molecular Liquids*, 2021.

ALTRE PUBBLICAZIONI

- 1 **A. Cincotti**, R. Orrù, M. Sannia, D. Zedda, G. Cao, "Combustion Front Quenching Technique for SHS Macrokinetic Studies", *Advances in Science and Technology – New Horizons for Materials*, P. Vincenzini Ed., Techna S.r.l., 231-238, Faenza, Italy, 1999.
- 2 G. Cao, R. Orrù, **A. Cincotti**, E. Medda, "Self-propagating high-temperature reactions: remarks and recent results", *Recent Research Developments in Chemical Engineering - Transworld Research Network*, **4**, 383-441, Trivandrum, India, 2000.
- 3 A. M. Locci, **A. Cincotti**, F. Delogu, R. Orrù, G. Cao, "Modeling of self-propagating reactions: past approaches and future directions", *International Journal of SHS*, 12 (2), 61-90, Allerton Press Inc., New York, USA, (2003).
- 4 A.M. Locci, R. Licheri, R. Orrù, A. Cincotti, **G. Cao**, "Spark Plasma Synthesis/Sintering of Dense Ceramic, Intermetallic and Composite Materials", *Advances in Science and Technology*, **45**, 1411-1416 (2006).
- 5 A. M. Locci, **A. Cincotti**, R. Orrù, G. Cao, "Advanced modeling of combustion synthesis", *Combustion of Heterogeneous Systems: Fundamentals and Applications*, Research Signpost Publisher, A. Mukasian and K. Martirosyan Editors, 1-39 (2007).
- 6 R. Licheri, R. Orrù, A. M. Locci, **A. Cincotti**, G. Cao, "Sintesi e simultanea sinterizzazione di materiali innovativi mediante Spark Plasma Sintering", *La Chimica e l'Industria*, **99**, 118-127 (2007).
- 7 G. Cao, R. Orrù, R. Licheri, **A. Cincotti**, A.M. Locci, "SHS in Italy: An Overview" *Int. J. SHS*, 17(1) 76-84 (2008).
- 8 **A. Cincotti**, S. Fadda, "Modeling the cryopreservation process of a suspension of cells: the effect of a size-distributed cell population" book Chapter in "Computational Modeling in Tissue Engineering", Ed. Liesbet Geris, (2013) 145–181, ISBN-10: 9783642325629 ISBN-13: 9783642325625, Online ISBN: 9783642325632 from the series of books "Studies in Mechanobiology, Tissue Engineering and Biomaterials", Ed. Amit Gefen, Pub. Springer-Verlag Berlin Heidelberg, DOI: 10.1007/8415_2012_134.

Presentazioni a Conferenze e Seminari

(*) indica la richiesta di un manoscritto

- 1 **A. Cincotti**, G. Cao , "Effect of Catalyst Concentration on the Liquid-Phase Catalytic Oxidation of *p*-Xylene and Simulation of the Precipitation Process of Terephthalic Acid", AIChE Meeting, Chicago, Illinois, USA, 1996.
- 2 (*)R. Orrù , B. Simoncini, M. Sannia, **A. Cincotti**, G. Cao, "Combustion synthesis of intermetallics", FRANTIC '97, Chia Laguna, I/1.1-I/1.4, 1997.
- 3 **A. Cincotti**, R. Orrù, B. Simoncini, M. Sannia, G. Cao , "Modeling of Combustion Front Quenching Technique", IV International Symposium Self-propagating High-temperature Synthesis, Toledo, Spain, 1997.
- 4 R. Orrù, B. Simoncini, M. Sannia, **A. Cincotti**, G. Cao, "Macrokinetic Studies of Hematite Reduction by Aluminum in the Presence of Additives", IV International Symposium Self-propagating High-temperature Synthesis, Toledo, Spain, 1997.
- 5 B. Simoncini, R. Orrù, M. Sannia, **A. Cincotti**, G. Cao , "Self-propagating Reactions for Treating and Recycling Zinc Hydrometallurgical Wastes, IV International Symposium Self-propagating High-temperature Synthesis, Toledo, Spain, 1997.
- 6 B. Simoncini, R. Orrù, **A. Cincotti**, G. Cao, "An innovative approach for treating and recycling zinc hydrometallurgical wastes", AIChE Meeting, Los Angeles, California, USA, 1997.
- 7 (*)R. Orrù, B. Simoncini, M. Sannia, **A. Cincotti**, G. Cao , "Materiali innovativi per sintesi autopropagante ad alta temperatura", Proceedings of Convegno-Esposizione Materiali Ricerca e Prospettive Tecnologiche alle soglie del 2000, Milano, 889-896, 1997.
- 8 R. Orrù, M. Sannia, **A. Cincotti**, G. Cao, "Treatment and Recycling of Zinc Hydrometallurgical Wastes by Self-propagating Reactions", *ISCRE 15 Meeting*, Newport Beach, California, USA (1998).
- 9 (*)**A. Cincotti**, R. Orrù, G. Cao , "Kinetics and related engineering aspects of catalytic liquid-phase oxidation of *p*-xylene to terephthalic acid", Proceedings of *V Seminar of Catalysis*, C. Perego & L. Forni (eds.), 275-291, 1998.
- 10 (*)**A. Cincotti**, R. Orrù, M. Sannia, G. Storti, G. Cao, "Indagine sperimentale e modellistica della tecnica di estinzione del fronte in reazioni di combustione autopropagante per la sintesi di materiali avanzati", Proceedings of *IV Congresso Nazionale AIMAT*, 209-216, Chia (Cagliari), Italy, 1998.
- 11 (*)**A. Cincotti**, R. Orrù, G. Carta, G. Cao, "On the Liquid-Phase Catalytic Oxidation of *p*-Xylene: the Influence of Catalyst Concentration", Proceedings of *International Conference on Catalysis in Multiphase Reactors*, 3-10, Toulouse, France, 1998.
- 12 (*)M. Sannia, B. Simoncini, R. Orrù, **A. Cincotti**, G. Cao, "Sviluppo di una tecnica innovativa per il trattamento e il riciclo di residui della idrometallurgia dello zinco", Proceedings of *IV Congresso Nazionale AIMAT*, 594-601, Chia (Cagliari), Italy, 1998.
- 13 (*)R. Orrù, **A. Cincotti**, M. Sannia, D. Zedda, G. Cao , "Macrokinetics Studies on Combustion Synthesis: Experimental and Modeling", *Combustion Meetings '98*, 201-204, Napoli, Italy, 1998.

- 14 (*)R. Orrù, **A. Cincotti**, D. Zedda, M. Sannia, G. Pilloni, G. Cao , “Metodologie per lo Studio di Reazioni Solido-Solido Autopropaganti”, Proceedings of *Congresso GRICU 1998*, 55-58, Ferrara, Italy, 1998.
- 15 (*)**A. Cincotti**, M. Murru, G. Cao , B. Marongiu, F. Masia, M. Sannia, “Equilibri Liquido-Liquido tra Formilmorfolina, Paraffine ed Aromatici”, Proceedings of *Congresso GRICU 1998*, 425-428, Ferrara, Italy, 1998.
- 16 (*)G. Murgia, **A. Cincotti**, R. Orru, D. Zedda, G. Cao, “Macrokinetics Studies For Solid-Solid Self-Propagating Reactions”, Proceedings of ICheaP-4, 75-78, Firenze, Italy (1999).
- 17 (*)R. Orrù, **A. Cincotti**, N. Lai G. Cao, P. Accardo, M. Boi, R. Lonis, “Utilization of Sardinian Natural Clinoptilolites for Heavy Metals and Ammonia Removal”, IEX2000, J.A. Greig (ed.), The Royal Society of Chemistry, Imperial College Press, 158-165, Cambridge, UK, 2000.
- 18 (*)M. Pisu, **A. Cincotti**, G. Cao, F. Pepe. “Oxidation of calcium bisulfite in the wet limestone-gypsum flue-gas desulfurization process: experiments and modeling”. Workshop on Mass Transfer, Distillation and Absorption Processes, Winthertur, Switzerland, May, 5th (2000).
- 19 (*)M. Pisu, **A. Cincotti**, R. Orru', G. Cao, Z.A. Munir. Modeling of Electric Field Activated Self Propagating Reactions. CIMTEC - International Conference of Mass and Charge Transport in Inorganic Materials: Fundamentals to Devices – Part B, Jesolo Lido, Venezia, Italy, 28 Maggio – 5 Giugno, P. Vincenzini e V. Buscaglia Eds., Techna Srl, 905-912, (2000).
- 20 N. Lai, **A. Cincotti**, R.Orrù, G.Cao “Heavy Metals and Ammonium Removal by Sardinian Natural Clinoptilolites” 5° Congresso Nazionale Scienza e Tecnologia delle Zeoliti, Ravello (SA), Italy, 1-5 Ottobre (2000).
- 21 **A. Cincotti**, N. Lai, R. Orrù, G. Cao “Sardinian natural clinoptilolites for heavy metals and ammonium removal: experimental and modeling” *AICHE Meeting*, Reno, Nevada, USA (2001).
- 22 A.M. Locci, **A. Cincotti**, M. Pisu, R. Orrù, G. Cao, “Simulazione del processo di sintesi di materiali innovativi per combustione autopropagante ad alta temperatura attivata da campo elettrico”, Corso seminariale di Metallurgia, Cassino (2001).
- 23 R. Orrù, **A. Cincotti**, A. Concas, G. Cao, “Self-propagating reactions for environmental protection: state of the art and future directions”, IV Convegno del Consorzio Interuniversitario Nazionale La Chimica per l’Ambiente, S. Margherita Ligure (2001).
- 24 (*) M. Pisu, N. Lai, **A. Cincotti**, D. Carta, G. Peronetti, G. Cao, F. Pepe , “Simulation of uncatalyzed bisulfite oxidation under chemical and mass transfer controlled regimes”, Proceedings of ICheaP-5, 37-41, Firenze, Italy (2001).
- 25 (*) N. Lai, **A. Cincotti**, R. Orrù, M. Pisu, G. Cao, “Heavy metals and ammonium removal by sardinian natural clinoptilolites”, Proceedings of ICheaP-5, 403-408, Firenze, Italy (2001).
- 26 (*) R. Orrù, M. Sannia, A. Concas, **A. Cincotti** , G. Usai, G. Cao, “Self-propagating reactions for environmental protection: a promising field in environmental chemical engineering”, Proceedings of ICheaP-5, 327-332, Firenze, Italy (2001).
- 27 (*) M. Pisu, **A. Cincotti** , R. Orrù, A. M. Locci, G. Cao, A. Viola, “A two-dimensional model electric field-activated self-propagating reactions”, Proceedings of ICheaP-5, 87-92, Firenze, Italy (2001).

- 28 A.M. Locci, **A. Cincotti**, M. Pisu, R. Orrù, G. Cao, “Simulazione del processo di sintesi di materiali innovativi per combustione autopropagante ad alta temperatura attivata da campo elettrico”, Corso seminariale di Metallurgia, Cassino (2001).
- 29 (*) G. Cao, R. Orrù, E. Medda, A. Locci, **A. Cincotti**, “ Effect of microgravity on high-temperature self-propagating reactions”, VI International Microgravity Compustion Workshop, Cleveland, Ohio (2001).
- 30 (*) A. Uda, A. M. Locci, **A. Cincotti**, R. Orrù, G. Cao, “Microgravity effects on high-temperature self-propagating reactions”, Workshop "La scienza e la tecnologia sulla stazione spaziale internazionale (ISS)", Torino, Italy (2001).
- 31 (*) **A. Cincotti**, R. Orrù, G. Cao, G. Murgia, “On the modeling of the copper block front quenching technique to investigate solid-solid self-propagating high-temperature reactions”, *Science and Supercomputing at CINECA Report 2001*, 202-210 (2001).
- 32 R. Orrù, **A. Cincotti**, A. Concas, G. Cao, “SELF-PROPAGATING REACTIONS FOR ENVIROMENTAL PROTECTION: STATE OF THE ART AND FUTURE DIRECTIONS”, IV Convegno del Consorzio Interuniversitario Nazionale La Chimica per l’Ambiente, S. Margherita Ligure (2001).
- 33 (*)M. Pisu, **A. Cincotti**, G. Cao, F. Pepe, “Simulation of the effect of mass transfer limitations in complex gas-liquid reactions”, *Proceedings of the International Symposium Reaction Kinetics and Development of Catalytic Processes*, Froment and Waugh Editors, Elsevier, 471-476, Amsterdam, Netherlands, (2001).
- 34 (*)R. Orrù, F. Delogu, A. Uda, **A. Cincotti**, A. Locci, R. Licheri, G. Cao, “Tecnologie innovative di sintesi di materiali per applicazioni aerospaziali”, Atti del Workshop "Materiali per lo spazio: sintesi, metodologie, tecnologie - BONASSOLA (SP)", *Passerone A. and Muolo M. L. Eds.*, 79-109 (2001).
- 35 (*)A. Concas, C. Patteri, **A. Cincotti**, G. Cao, “Metal contamination from abandoned mining sites: Experimental investigation on possible remediation techniques”, *Proc. of the VII International Conference on Environmental Issues and Waste Management in Energy and Mineral Production, SWEMP '02*, R. Ciccu (Ed.), Grafiche Galeati, Imola, 237-242 (2002).
- 36 (*)A. Mameli, **A. Cincotti**, N. Lai, M. Palomba, R. Orrù, G. Cao, “Lead uptake by natural zeolites”, *Proc. of the VII International Conference on Environmental Issues and Waste Management in Energy and Mineral Production, SWEMP '02*, R. Ciccu (Ed.), Grafiche Galeati, Imola, 769-775 (2002).
- 37 (*) M. Pisu, **A. Cincotti**, A. M. Locci, R. Orrù, G. Cao, “Mathematical modeling of electric field-activated combustion reactions”, *Combustion and Sustainable Development: XXV Event of the Italian Section of The Combustion Institute*, Rome, 3-5 June, I.5-I.8 (2002).
- 38 R. Orrù, **A. Cincotti**, A. Locci, R. Licheri, E. Medda, F. Delogu, G. Pilloni, G. Usai, G. Cao, “NOVEL COMBUSTION SYNTHESIS TECHNOLOGIES“, *WORKSHOP on MATERIALS SCIENCE IN ITALY IN THE EUROPEAN FRAME*, Florence, Italy (2002).
- 39 **A. Cincotti**, G. Cao, “Simulazione modellistica del trasporto di cationi attraverso membrane polimeriche contetenti eteri corona”, *La Parola ai Giovani*, Cagliari, (2002).
- 40 N. Lai, **A. Cincotti**, G. Cao, “Simulazione modellistica di processi di adsorbimento su carboni attivi e verifiche sperimentali”, *La Parola ai Giovani*, Cagliari, (2002).

- 41 A. Mameli, **A. Cincotti**, G. Cao, "Caratterizzazione di zeoliti naturali disponibili in Sardegna per applicazioni ambientali", *La Parola ai Giovani*, Cagliari, (2002).
- 42 N. Lai, A. Mameli, **A. Cincotti**, G. Cao, "Mathematical modeling of adsorption onto activated carbon from natural sources", *V Congresso Nazionale del Consorzio INCA, Tunisi* (2002).
- 43 **A. Cincotti**, G. Cao, "Simulation of alkali metal cation transport through a polymer-inclusion membrane with calixcrown carrier", *V Congresso Nazionale del Consorzio INCA, Tunisi* (2002).
- 44 A. Mameli, **A. Cincotti**, N. Lai, S. Naitza, M. Palomba, R. Orrù, G. Cao, "Natural zeolites for lead removal", *V Congresso Nazionale del Consorzio INCA, Tunisi* (2002).
- 45 A. Concas, **A. Cincotti**, G. Cao, "Environmental characterization and experimental investigation on possible remediation technique of metal contamination from abandoned mining sites", *V Congresso Nazionale del Consorzio INCA, Tunisi* (2002).
- 46 A. Mameli, **A. Cincotti**, N. Lai, R. Orrù, G. Cao, "Processi di adsorbimento/scambio ionico su zeoliti naturali", *Workshop PROGEMISA "Sviluppo di applicazioni industriali di zeoliti naturali della Sardegna nella depurazione delle acque"*, Cagliari (2002).
- 47 A.M. Locci, **A. Cincotti**, F. Delogu, R. Orrù, G. Cao, "Approccio innovativo alla simulazione modellistica del processo di sintesi autopropagante ad alta temperatura", *Convegno AIM, Modena, Italy*, 13-15 Novembre (2002).
- 48 M.Pisu, N. Lai, **A. Cincotti**, F. Delogu, G. Cao, "A simulation model for the growth of tissue cartilage on polymeric scaffolds", *AIChE Annual Meeting, USA* (2002).
- 49 G. Cao, A. Concas, A. Mameli, N. Lai, **A. Cincotti**, "Un approccio integrato per la bonifica del sito ACNA di Cengio", *Soil Remediation Series No.1, P. Canepa Editor*, 35-45 (2002).
- 50 (*) M. Pisu, N. Lai, **A. Cincotti**, F. Delogu, G. Cao, "A simulation model for the growth of engineered cartilage on polymeric scaffolds", *Proceedings of the VI Italian Conference on Chemical and Process Engineering, Chemical Engineering Transactions, S. Pierucci Editor*, 1307-1312, (2003).
- 51 (*) **A. Cincotti**, R. Licheri, A. Locci, R. Orrù, G. Cao, "Combustion synthesis of novel materials: an overview of recent results", *Proceedings of the VI Italian Conference on Chemical and Process Engineering, Chemical Engineering Transactions, S. Pierucci Editor*, 237-242, (2003).
- 52 (*) A. M. Locci, **A. Cincotti**, F. Delogu, R. Orrù, G. Cao, "Modeling of self-propagating reactions: past approaches and future directions", *Proceedings of the VI Italian Conference on Chemical and Process Engineering, Chemical Engineering Transactions, S. Pierucci Editor*, 309-314, (2003).
- 53 (*) A. Mameli, **A. Cincotti**, N. Lai, G. Cao, S. Naitza, M. Palomba, "Characterization of zeolites from Romana (NW Sardinia, Italy) for environmental applications", *Proceedings of the International Conference Euroclay 2003* (2003).
- 54 A.M. Locci (speaker), **A. Cincotti**, F. Delogu, R. Orrù, G. Cao, "Modeling of self-propagating reactions: past approaches and future directions", *VII International Symposium on Self-propagating High-temperature Synthesis (SHS), Cracow, Poland* (2003).

- 55 R. Licheri (speaker), R. Orrù, **A. Cincotti**, G. Cao, “ Synthesis of Ti/TiC by Chemically Activated Self-propagating Reactions, *VII International Symposium on Self-propagating High-temperature Synthesis (SHS), Cracow, Poland* (2003).
- 56 **A. Cincotti** (speaker), A. Locci, F. Delogu, R. Orrù, G. Cao, “Advanced Modeling Approach for Self-propagating High-temperature Synthesis of Ceramics”, *AIChE Annual Meeting, San Francisco, USA* (2003).
- 57 (*) A. M. Pisu, **A. Cincotti**, G. Cao, F. Pepe “Prediction of uncatalyzed calcium bisulfite oxidation under operating conditions relevant to wet flue gas desulphurization plants”, *Icheme Transactions, Part A, Chemical Engineering Research and Design*, 82(A7), 927-932, (2004).
- 58 (*) M. Pisu, N. Lai, A. Concas, **A. Cincotti**, G. Cao, “Growth of engineered cartilage in rotating bioreactors : a simulation model”, *Convegno GRICU 2004, Ischia (NA), Italy*, 257-260 (2004).
- 59 (*) R. Orrù, **A. Cincotti**, G. Cao, “Self-propagating reactions for environmental applications”, *Convegno GRICU 2004, Ischia (NA), Italy*, 821-824 (2004).
- 60 (*) A.M. Locci, R. Orrù, **A. Cincotti**, G. Cao, “Sintesi e simultaneo consolidamento di materiali innovative mediante la tecnologia Spark Plasma Sintering (SPS)”, *GRICU 2004, Ischia (NA), Italy*, 1115-1118 (2004).
- 61 (*) A.M. Locci, **A. Cincotti**, F. Delogu, R. Orrù, G. Cao, “Advanced modelling of self-propagating high-temperature synthesis”, *GRICU 2004, Ischia (NA), Italy*, 1159-1161 (2004).
- 62 A. M. Locci, **A. Cincotti**, R. Orrù, G. Cao, “Reactivity of solids in the synthesis and densification of advanced materials by spark plasma sintering”, *13th International Congress on Thermal Analysis and Calorimetry ICTAC 13, Chia (CA), Italy*, 12-19 Settembre (2004).
- 63 A. M. Locci, R. Orrù, **A. Cincotti**, G. Cao, “Simultaneous Spark Plasma Synthesis and Densification of Nanocrystalline TiC/TiB₂ Composites”, *SAMIC 2004, Bressanone, Italy* (2004).
- 64 (*) A. M. Locci, R. Orrù, **A. Cincotti**, G. Cao, “Synthesis and densification of Carbides- and Borides- based materials by SPS”, *Proceedings of the VII Italian Conference on Chemical and Process Engineering, Chemical Engineering Transactions, S. Pierucci Editor*, 509-514, (2005).
- 65 A. M. Locci, R. Orrù, **A. Cincotti**, G. Cao, “Synthesis and densification of Carbides- and Borides- based materials by SPS”, *VIII International Symposium on Self-propagating High-temperature Synthesis (SHS), Cagliari, Italy* (2005).
- 66 (*) A. M. Locci, R. Licheri, R. Orrù, **A. Cincotti**, G. Cao, “Synthesis/Sintering of Dense Carbides-, Borides- and Perovskites- Based Materials by SPS”, *6th Pacific Rim Conference on Ceramic and Glass Technology, Hawaii, USA*, (2005).
- 67 G. Cao, **A. Cincotti**, R. Licheri, A. Locci, R. Orrù, “Preparation of dense carbides-, borides- and perovskite-based materials by SPS”, *V Convegno Nazionale sulla Scienza e Tecnologia dei Materiali, Cagliari, Italy*, 26-29 Settembre (2005).
- 68 A.M. Locci, R. Orrù, **A. Cincotti**, G. Cao, “Spark Plasma Sintering Synthesis and densification of Carbides- and Borides- based composites”, *V Convegno Nazionale sulla Scienza e Tecnologia dei Materiali, Cagliari, Italy*, 26-29 Settembre (2005).
- 69 A.M. Locci, R. Orrù, **A. Cincotti**, R. Licheri, G. Cao, “Remarks on gravity-driven transport phenomena during combustion synthesis processes”, *ELGRA biennial meeting 2005, Santorini, Greece*, 21-23 Settembre (2005).

- 70 A.M. Locci, R. Orrù, **A. Cincotti**, G. Cao, “Synthesis and simultaneous densification of composite materials by Spark Plasma Sintering (SPS)”, *7th World Congress of Chemical Engineering, Glasgow, Scotland, 10-14 Luglio* (2005).
- 71 A.M. Locci, R. Licheri, R. Orrù, **A. Cincotti**, G. Cao, J. De Wilde, F. Lemoisson, L. Froyen, I.A. Beloki, A.E. Sytshev, A.S. Rogachev, D.J. Jarvis, “Self-propagating combustion synthesis under microgravity conditions: theoretical analysis of experimental evidences”, *Science on European Soyuz Missions to the ISS (2001-2005), Toledo, Spain, 27-30 June* (2006).
- 72 A.M. Locci, R. Licheri, R. Orrù, **A. Cincotti**, G. Cao “Spark Plasma Synthesis/Sintering of Dense Ceramic, Intermetallic and Composite Materials” CIMTEC 2006, 11th International Ceramics Congress, Acireale, Sicily, Italy, June 4-9, *Advances in Science and Technology* Vol. 45, pp. 1411-1416 (2006).
- 73 S. Montinaro, A. Concas, M. Pisu, S., Fadda, **A. Cincotti**, G. Cao, "Immobilization of heavy metals in contaminated soils", *Proceeding of the Eighth International Conference on Chemical and Process Engineering, ICHEAP8, Chemical Engineering Transactions, Editor Pierucci, Publisher AIDIC Servizi SRL*, 11, 797-802 (2007).
- 74 R. Licheri, R. Orrù, A.M. Locci, **A. Cincotti**, G. Cao, “Innovative Technologies for the Fabrication of Ultra-High Temperature Ceramic Materials for Extreme Environment Applications” *The 20th International Symposium on Chemical Reaction Engineering (ISCRE 20)*, Kyoto, Japan, 7-10 Settembre (2008).
- 75 L. Mancuso, M.I. Liuzzo, S. Fadda., M. Pisu, **A. Cincotti**, G. Cao, “Experimental Analysis and Modelling of Bone Marrow Mesenchymal Stem Cells (BMSC) Proliferation”. *The 20th International Symposium on Chemical Reaction Engineering (ISCRE 20)*, Kyoto, Japan, 7-10 Settembre (2008).
- 76 **A. Cincotti**, A.M. Locci, R. Orrù, R. Licheri, C. Musa, G. Cao, “Modelling of SPS / synthesis apparatus: temperature, current and strain distribution with no powder”. *International Workshop on SPS, Avignone (Fr), 6-7 Ottobre* (2008).
- 77 (*) S. Fadda, **A. Cincotti** and G. Cao, “Modelling breakage and reagglomeration during fine dry grinding in ball milling devices”, ICheaP9 Conference 10-13 May Rome, (2009), *Chemical Engineering Transactions*, 17, 687-692 DOI: 10.3303/CET0917115.
- 78 (*) L. Mancuso, M.I. Liuzzo, S. Fadda, M. Pisu, A. Concas, **A. Cincotti** and G. Cao, “Experimental analysis and modeling of in vitro mesenchymal stem cells proliferation”, ICheaP9 Conference 10-13 May Rome, (2009), *Chemical Engineering Transactions*, 17, 1059-1064 DOI: 10.3303/CET0917177.
- 79 (*) S. Fadda, **A. Cincotti** and G. Cao G., “A population balance approach for the description of water osmosis and intracellular ice formation during cryopreservation”, ICheaP9 Conference 10-13 May Rome, (2009), *Chemical Engineering Transactions*, 17, 1125-1130 DOI: 10.3303/CET0917188.
- 80 S. Fadda, and **A. Cincotti**, “A population balance model to describe the cooling stage of cryopreservation”, *Cryo The 2nd International Congress on Controversies in Cryopreservation of Stem Cells, Reproductive Cells, Tissue & Organs, 7-9 April Valencia (Spain),* (2011).
- 81 (*) S. Fadda, **A. Cincotti** and G. Cao G., “A population balance model to investigate the effect of microgravity on the kinetics of *in vitro* cell proliferation”, ICheaP10 Conference 8-11 May Florence, (2011).
- 82 S. Fadda, and **A. Cincotti**, “Modelling the cryopreservation process: the effect of the cell size distribution”, *Cryo2012, 49th annual meeting of the society for Cryobiology, 3-6 June Rosario (Argentina),* (2012).

- 83 (*) A. Cincotti and S. Fadda, "Modelling the cryopreservation process of a size-distributed cell population", 5th Population Balance Modelling PBM 2013 Conference, 11-13 September 2013, Bangalore (INDIA).
- 84 (*) E. Casula, G. P. Asuni, V. Sogos, **A. Cincotti**, "MSCs from UCB: isolation, characterization and determination of osmotic properties for optimal cryopreservation", ICheaP12 Conference 19-22 May, Milan (2015).
- 85 E. Casula, S. Fadda, **A. Cincotti**, "Isolation, characterization and analysis of t the osmotic behaviour of hMSCs from UCB for optimal cryopreservation", AIChE Annual Meeting, 8-13 Nov, Salt Lake City, UT (USA), (2015). In: Food, Pharmaceutical and Bioengineering Division 2015 - Core Programming Area at the 2015 AIChE Meeting. vol. 2, p. 682-684, AIChE, ISBN: 9781510818606, USA.
- 86 (*) A. Usai, D. Peddio, **A. Cincotti**, "Kinetics of nitrate- and nitrite-removal by Rhodotorula Glutinis: determination of a reaction mechanism", IBIC 2016, 10-13 Apr, Bologna (2016).
- 87 E. Casula, G. Asuni, S. Fadda, V. Sogos, **A. Cincotti**, "Analysis of the osmotic behaviour for optimal cryopreservation of hMSCS from UCB", Cryo 2016, The 53rd Annual Meeting of the Society for Cryobiology, 24-27 Jul, Ottawa (CAN), (2016).
- 88 (*) E. Casula, S. Fadda, Oleksiy V. Klymenko, Cleo Kontoravdi, **A. Cincotti**, "A Novel Model for the Osmotic Behaviour of Human Mesenchymal Stem Cells", AIChE Annual Meeting, 13-18 Nov, San Francisco, CA (USA), (2016).
- 89 G. Pia, **A. Cincotti**, F. Delogu, "A tentative description of the first stages of mechanical alloying", INCOME 2017, 9th International Conference on Mechanochemistry and Mechanochemical Alloying, 3-7 Sept, Košice, Slovakia (2017)
- 90 **A. Cincotti**, G. Pia, L. Takacs, F. Delogu, "Propagation modes of self-sustaining reactions activated by mechanical processing", INCOME 2017, 9th International Conference on Mechanochemistry and Mechanochemical Alloying, 3-7 Sept, Košice, Slovakia (2017)
- 91 (*) G. Traversari, **A. Cincotti**, "Contact with DMSO for cryopreservation of hMSCs from UCB: experiments and modeling on the osmotic and cytotoxic effects", PBM2018, 6th Population Balance Modelling Conference, 7-9 May, Ghent, Belgium (2018)
- 92 **A. Cincotti**, "Mathematical modelling on living cells desiccation: the continuum, engineering approach", Workshop on CURRENT ENGINEERING APPROACHES FOR CONTROLLED WATER SUBTRACTION IN LIVING CELLS/ GERMPLASM/ MODEL ORGANISMS, 26th April 2018, University of Teramo, Italy
- 93 G. Traversari, **A. Cincotti**, "Modelling the osmotic behaviour of human mesenchymal stem cells", Symposium meeting "Extreme Cryo 2020. Survival of the Frozen: An Avalanche of Ideas in Cool Biomedical Research", 31st Jan-1st Feb 2020, University of Alberta, Edmonton (CANADA).