This document gathers a tribute to Miguel Julve prepared by Michel Verdaguer and Carlos Gomez, presented at the European Conference on Molecular Magnetism (ECMM2024) in Krakow by Carlos Gomez. A few slides have been modified, displaced or added by MV after the presentation.

and a tribute by Professor Coronado, Head of the Institute of Molecular Science (ICMOl) in Valencia at the International Conference in Coordination Chemistry (ICCC2024) in Fort Collins, USA.

michel.verdaguer@upmc.fr
carlos.gomez@uv.es
eugenio.coronado@uv.es

# *Tribute to Miguel Julve Olcina (1953-2024)*

*by Michel Verdaguer and Carlos Gomez*

*with thanks to Francisco Romero, Joan Cano, Santiago Alvarez, Maria Jose Sanz*

Yesterday, disappeared Professor
MIQUEL JULVE OLCINA
Professor of the Department of Inorganic Chemistry.
The consternation of all the members of the Faculty … shows the personal affection of which he was worthy.
Miguel was a good person
Around him, this university world was kinder, less complex, less tense.

*Department of Inorganic Chemistry*
*Valencia University, July 11, 2024*

# *The scientist*

# Miguel Julve

Oustanding
coordination chemist

Green fingers' synthetic
molecules' chiseller

... a few glimpses
on times of creation

# *A beautiful scientific career*

## *Career*

| | |
|---|---|
| *1977* | *Bachelor at Valencia University* |
| *1978* | *Chemistry Degree Valencia University* |
| *1981* | *PhD (Chemistry), Valencia University* |
| *1981-1983* | *Post Doctoral Position* |
| | *Paris-Sud University (Prof. Olivier Kahn)* |

***Positions***

| | |
|---|---|
| *1977-1982* | *Teaching assistant* |
| *1982-1983* | *CNRS Fellow Paris-Sud University* |

***Valencia University***
***Inorganic Chemistry Department***

| | |
|---|---|
| *1982-1985* | *Assistant Professor assistant* |
| *1985-1992* | *Associate Professor* |
| *1992-2024* | *Full Professor* |

| | |
|---|---|
| *2000-2024* | *ICMol (2000-2024)* |

## *Works and Awards*

***Publications***

*≈ 650 articles, ≈ 29000 citations*
*(average per item 44),* ***h-index 85***

***Awards***

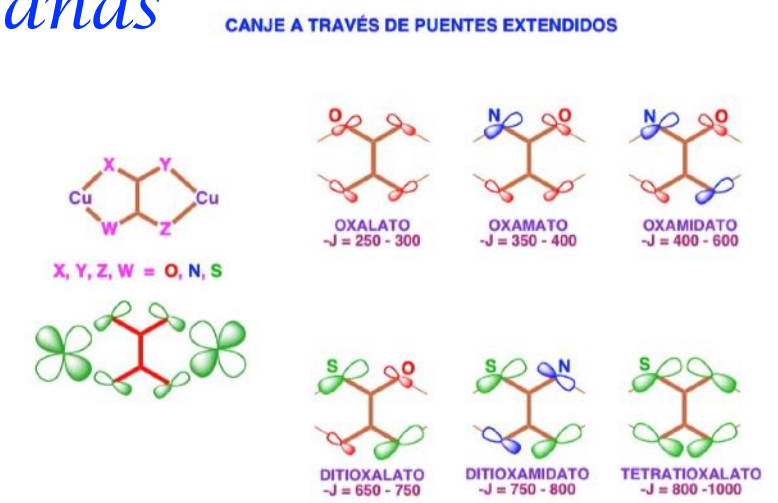
| | |
|---|---|
| *1982* | *Extraordinary doctorate award Univ. Valencia* |
| *2005* | *Best Senior Spanish Inorganic Chemist Prize* |
| | *Spanish Royal Society of Chemistry (RSEQ)* |
| *2008* | *Catalan-Sabatier Prize* |
| | *French Chemical Society (SCF)* |
| *2011* | *Election to the Academia Europaea* |
| | *(Chemical Sciences section)* |

***Honorary Causa Doctorate***

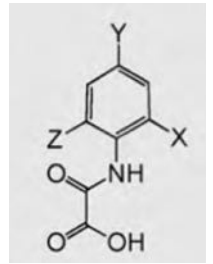
| | |
|---|---|
| *2014* | *Doctor Honoris Causa (Bucharest University)* |

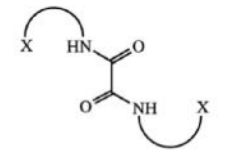
**Miguel Julve**
developed his research activity in coordination chemistry based on the conception and use of suitable metalloligands envisaging the materialization of new tailor-made homo- and heterobimetallic assemblies with tuneable magnetic properties.
Magnetochemistry of complexes with potential bis-bidentate spacers such as oxalato, oxamato, oxamidato, 2,2'-biyrimidine, cyanido and functionalized oxamate & oxamidate .
Chiral magnets, porous magnets, photomagnetic systems and redox switches …
Experiments and theory.

# *Ligands*



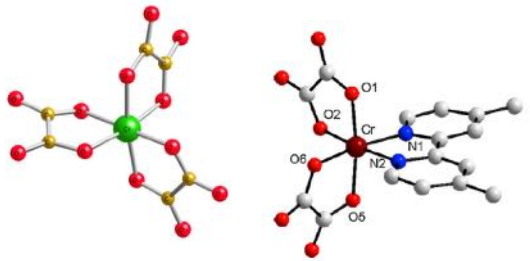

M. Verdaguer, O. Kahn, M. Julve, A .Gleizes, *Nouv. J. Chim.*, 1985, *9*, 325
S. Alvarez, M. Julve, M. Verdaguer, *Inorg. Chem.*, 1990, 29, 4500
J. Cano, E. Ruiz, P. Alemany, F. Lloret, S. Alvarez, *J. Chem. Soc., Dalton Trans.*, 1999, 1669

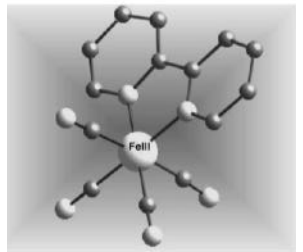


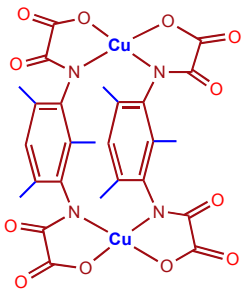



Scheme 2.

# *Complexes as ligands*



# Announced in 2003 as *nanowires*, then called *single-chain magnets*

2003

**Communications**

**Magnetic Nanowires**

R. Lescouëzec, J. Vaissermann, C. Ruiz-Pérez, F. Lloret, R. Carrasco, M. Julve,* M. Verdaguer,* Y. Dromzee, D. Gatteschi, W. Wernsdorfer ——— 675–686

Cyanide-Bridged Iron(III)–Cobalt(II) Double Zigzag Ferromagnetic Chains: Two New Molecular Magnetic Nanowires

**Keywords:**
chain structures · cobalt · cyanide ligands · ferromagnetism · iron

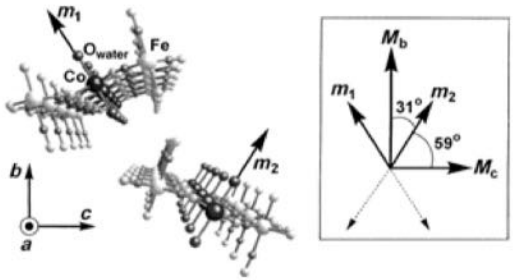
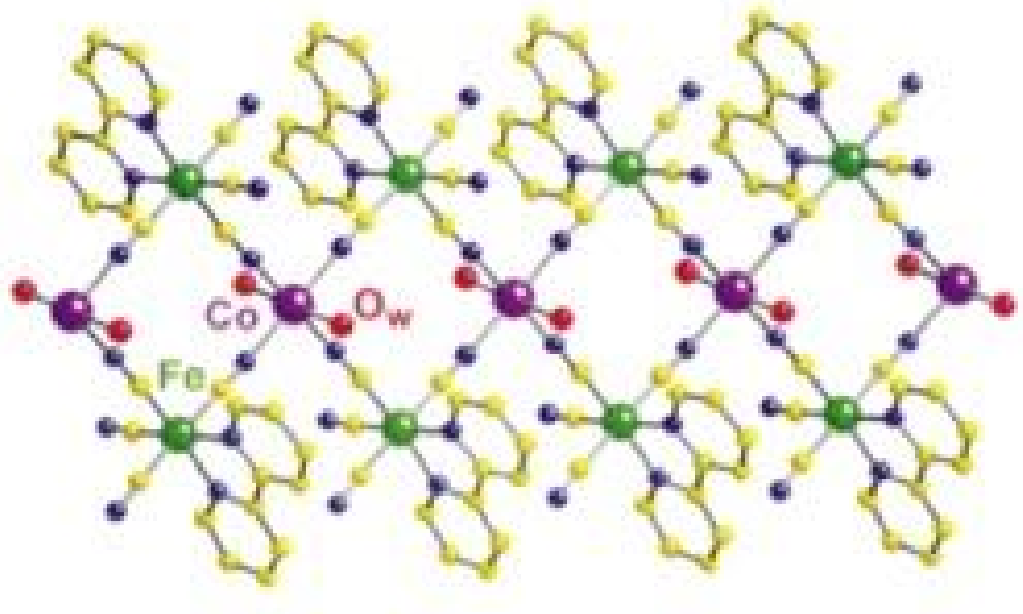



***Figure 4:*** Orientation of the vectors of the double-chain structure.



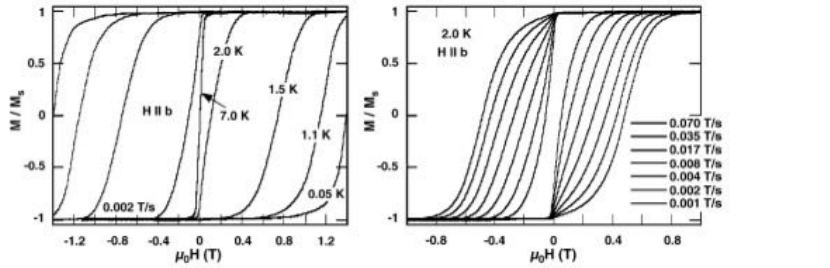
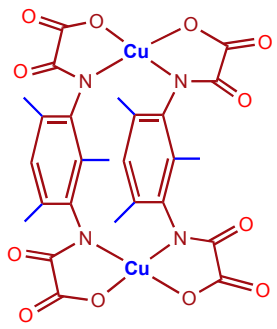




Fig. 47. Field dependence of the normalized magnetization ($M/M_S$) measured on a single crystal of $\{[Fe^{III}(bipy)(CN)_4]_2Co^{II}(H_2O)_2\}\cdot 4H_2O$ along the *b* axis: hysteresis loops measured at various temperatures with 0.002 T $s^{-1}$ field sweep rate (left) and at 2.0 K under different field sweep rates (right).

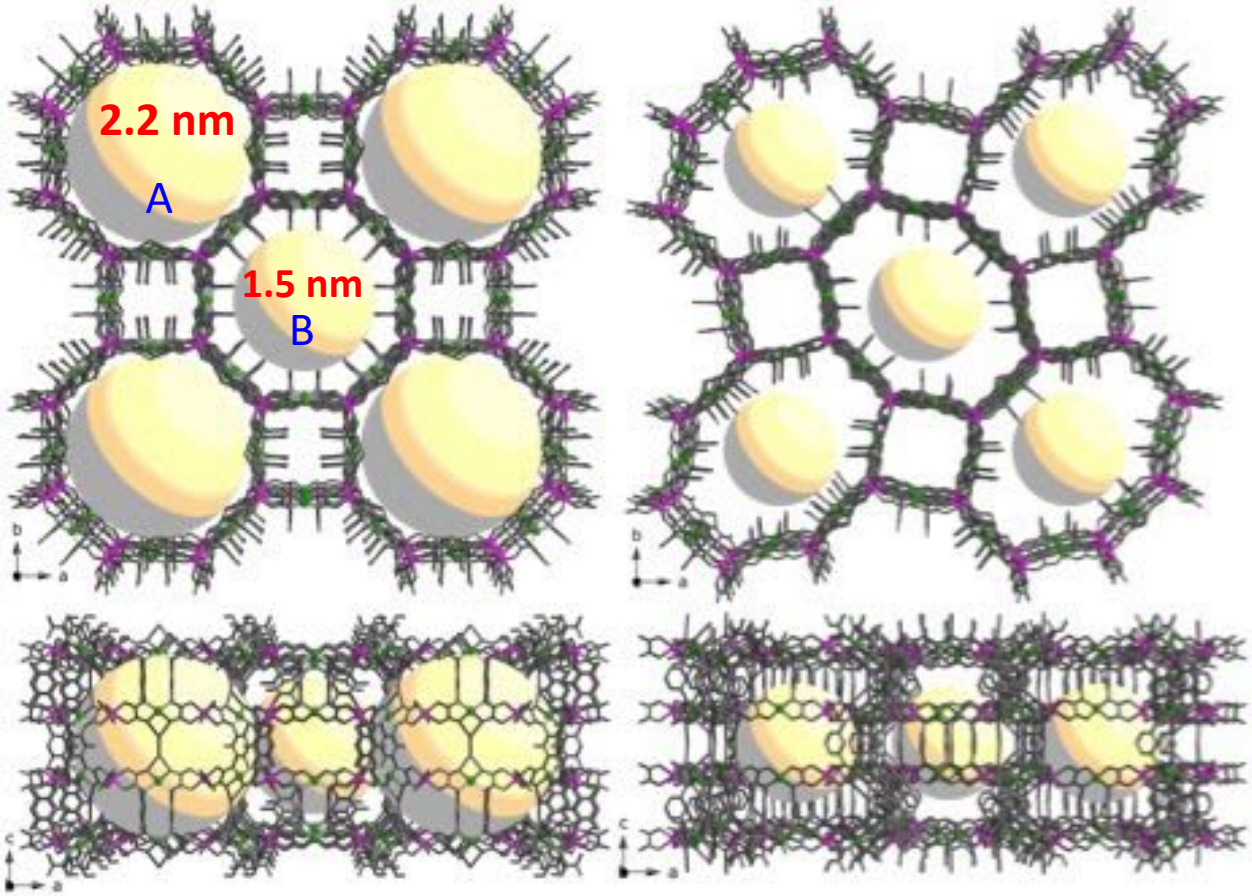
Angew. Chem. Int. Ed. 42(13): 1483-1486, 2003

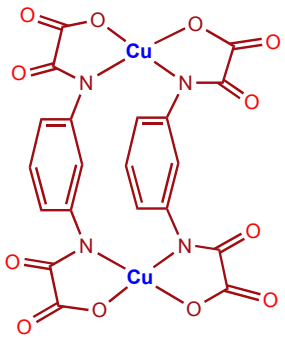
# *Porous Magnets* 2012

A = Hydrophilic  B = Hydrophobic



tri-Methylated



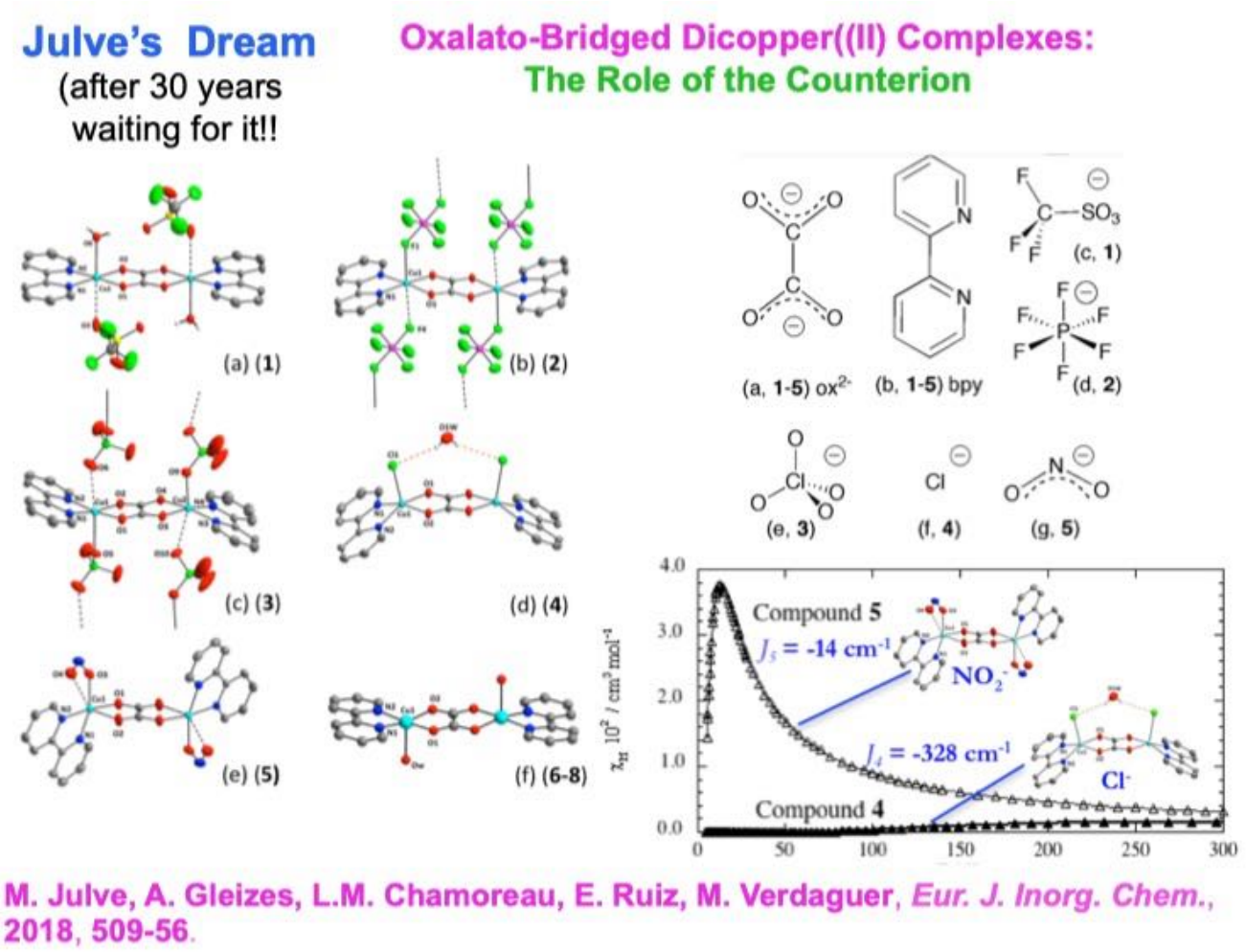
Non-Methylated

J. Ferrando-Soria, *et al., J. Am. Chem. Soc.*, **2012**, **134**, 15301

# An incredible « rational miracle »

# Or : 30 years of Miguel's determination

*2018*




M. Julve, A. Gleizes, L.M. Chamoreau, E. Ruiz, M. Verdaguer, *Eur. J. Inorg. Chem.*, 2018, 509-56.

Unbelievable story of a simple idea and a beautiful result

Role of counterions on exchange in dinuclear oxalato copper(II) complexes

**Paper first rejected**

**Forgotten during 30 years**

**Completely adapted to new publications constraints on crystallographic data**

New single crystals grown from Miguel's green fingers !

# *Molecular Magnetism, quo vadis ?*
## *A coordination chemist's useful reflection*

**Molecule-Based Strategy Towards Multifunctional Materials**


**Metalloligands as building blocks:**

**Cyanidometallates**
**Polycarboxylate complexes**
**Oxamidato/oxamato complexes**

- Single Ion Magnets
- Nanocages/Nanowheels
- Honeycomb Materials
- Molecular Squares
- Molecular Wires
- Electro(Photo)-Switchable Systems
- pH-Triggered Switches
- Solvatomagnetic Switching
- Selective Gas Sorption/Magnetic Sensing
- Luminiscent Nanoporous Magnets
- Single-to-Single Crystal Transmetallation
- Ecologically benign catalysts

*J. Ferrando-Soria et al., Coord. Chem. Rev.*, **2017**, *339*, 17-103
M. Castellano *et al., Coord. Chem. Rev.*, **2015**, *303*, 110-138
M. Castellano *et al., Acc. Chem. Res.*, **2015**, *48*, 510-520

# *Original papers enlighted by robust reviews*

Rafa
1999

Coordination chemistry of *N,N′*-bis(coordinating group substituted)oxamides: a rational design of nuclearity tailored polynuclear complexes

Rafael Ruiz [a], Juan Faus [a], Francesc Lloret [a,1], Miguel Julve [a,*], Y. Journaux [b]

Rodrigue
2005

Design of single chain magnets through cyanide-bearing six-coordinate complexes

Rodrigue Lescouëzec [a], Luminita Marilena Toma [a], Jacqueline Vaissermann [b], Michel Verdaguer [b], Fernando S. Delgado [c], Catalina Ruiz-Pérez [c], Francesc Lloret [a], Miguel Julve [a,*]

Emilio
Dalton
2008

**Ligand design for multidimensional magnetic materials: a metallosupramolecular perspective**

Emilio Pardo [a], Rafael Ruiz-García [bc], Joan Cano [de], Xavier Ottenwaelder [f], Rodrigue Lescouëzec [g], Yves Journaux [g], Francesc Lloret [*d] and Miguel Julve [*a]

Joan
2010

Supramolecular coordination chemistr… de ligands: A metallosupramolecular approac… tic materials

Marie-Claire Dul [a], Emilio Pardo [a,*], …rnaux [a,b,**], Jesús Ferrando-Soria [c], Rafael Ruiz-García [c,d], Joan Ca… [c,*], Danielle Cangussu [e], Cynthia L.M. Pereira [f], Hu… , Catalina Ruiz-Pérez [g,*]

Marius
2011

Bis(oxala… ersatile tectons in designing hete… nds

…[d,*], Francesc Lloret [c], Miguel Julve [c,*]

…ctional magnetic systems through …ogrammed self assembly of Re(IV) metalloligands

…tínez-Lillo [*], Juan Faus, Francesc Lloret, Miguel Julve [*]

Jose
2015

Contents lists available at ScienceDirect

Coordination Chemistry Reviews

journal homepage: www.elsevier.com/locate/ccr

Review

Coordination Chemistry Group V

Molecular magnetism, *quo vadis?* A historical perspective from a coordination chemist viewpoint☆

Jesús Ferrando-Soria [a,*], Julia Vallejo [a,1], María Castellano [a,2], José Martínez-Lillo [a], Emilio Pardo [a], Joan Cano [a,b], Isabel Castro [a], Francesc Lloret [a], Rafael Ruiz-García [a,b], Miguel Julve [a,*]

Oxalato as polyatomic coordination center and magnetic coupler in copper(II)-polypyrazole inverse polynuclear complexes and coordination polymers

Isabel Castro [a,*], M. Luisa Calatayud [a], Marta Orts-Arroyo [a], Nadia Marino [b,*], Giovanni De Munno [b,*], Francesc Lloret [a], Rafael Ruiz-García [a], Miguel Julve [a,*]

Humberto
2010

Yves
2010

Jesus
2017

Isabel
2022

# Awards & Community Recognition

2009

French-Spanish Catalan-Sabatier
Award by Olivier Homolle,
President, French Chemical society
French Tour of conferences

2014


Honoris Causa doctorate
Exceptional Event for the 150th anniversary
of Bucharest University

2023


Francesc Lloret, Miguel Julve
With E. Coronado, S. Alvarez, M. Verdaguer
Retirement, ICMOl December 15

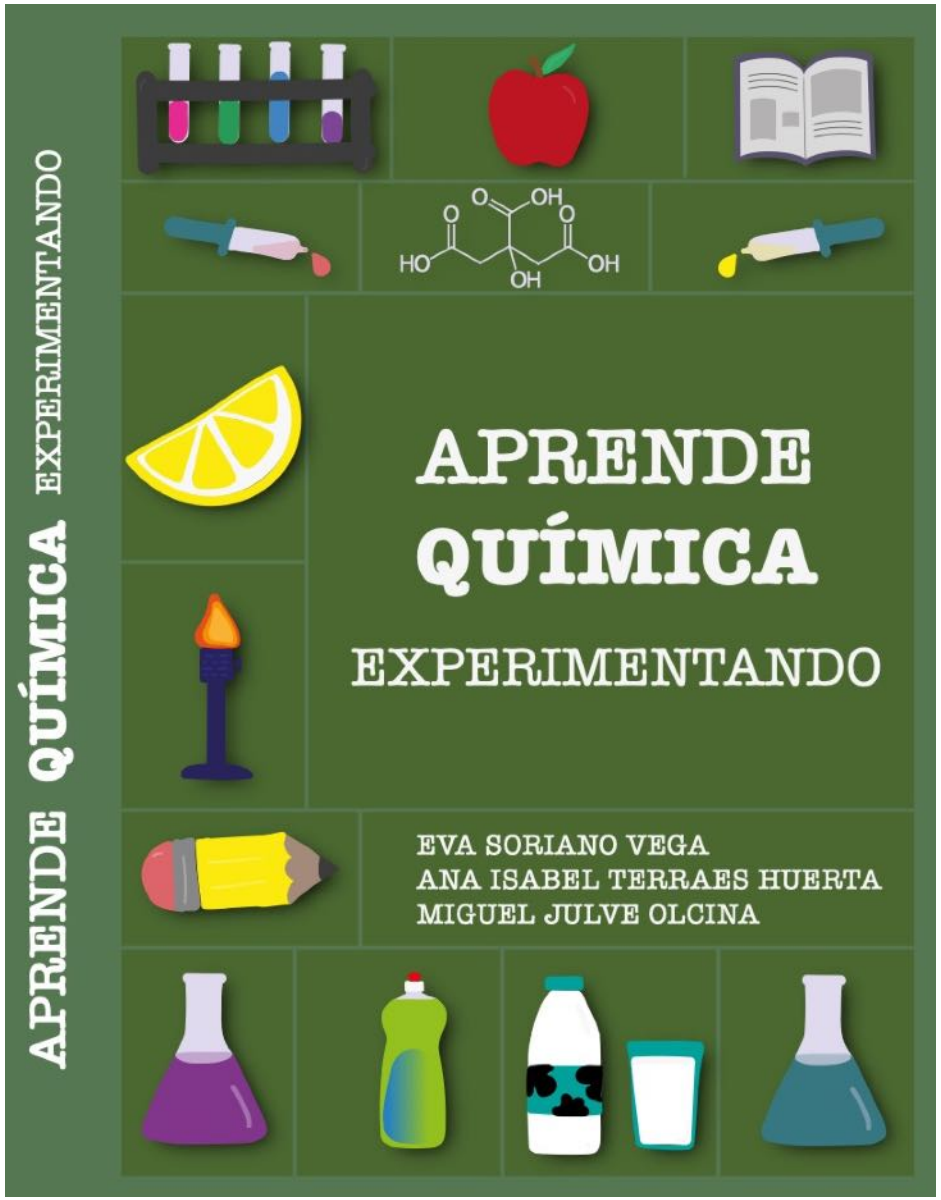
# *The Lecturer and Teacher*

Paris, Sorbonne Université, January 19, 2018

# *Passionate science divulgator*



« La magia de la Quimica »
Semanas de la Ciencia, UnIversidad de Valencia




Valencia University, Just published, 2024

# *Enthusiastic until the very last lecture and very last exam …*

May 2024


21st June 2024

# *The friend*

# A rare tight scientific link with his friend Francesc Lloret

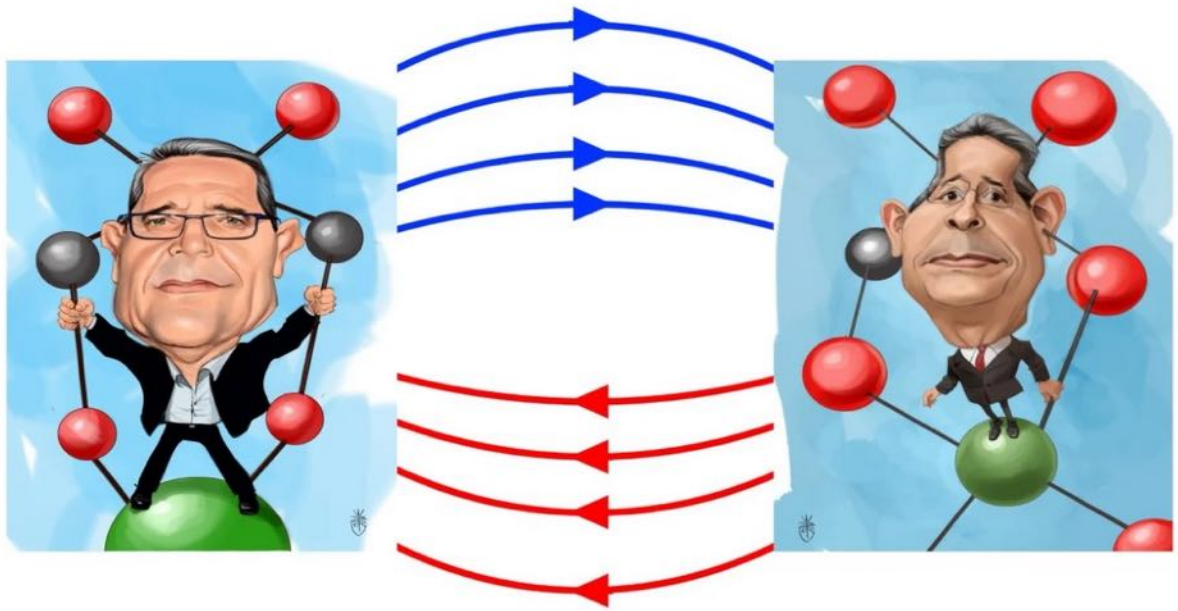
Paco

Miguel


From Youth to Retirement ICMol Dec. 15, 2023

# Magnetic Coordination Compounds and More... a Long and Successful Story: A Tribute to M. Julve and F. Lloret

- Print Special Issue Flyer
- Special Issue Editors
- Special Issue Information
- Keywords
- Published Papers
- Planned Papers



A special issue of ***Magnetochemistry*** (ISSN 2312-7481).

Deadline for manuscript submissions: **1 November 2024** | Viewed by 331

*A robust and creative coordination chemistry Valencian team…*

*Juan Faus*
*Miguel Julve*
*Francesc Lloret*

Fig. 1 in J. Coord. Chem. 71, 585-589, 2018 A Tribute to Juan Faus
https://doi.org/10.1080/00958972.2018.1443217

# *Scientists and friends*

## *Chemists, crystallographer, theoretician*
## *Spanish French Cooperation, Four European Academicians*


2008

Professors Francisco Lloret Pastor, Michel Verdaguer, Juan Faus, Santiago Alvarez Reverter, Carmen Munoz, Miguel Julve Olcina, Jose Antonio Real Cabeza

# *Miguel enjoying good company with friends*

*Experimental-theoretical connection*

*Spanish Rumanian French Connection*

*Retirement @ ICMol , bosses, families and friends*

*ICMol friends celebrating retirement*

*"I was lucky and happy to meet Miguel Julve, a creative chemist and scholar, open minded and nice man, thougthful husband and father, faithful friend. Many people, colleagues, coworkers and students have benefitted from his skills, his teaching, his enthusiasm and generosity. »*

*M. V.*

*Polyhedron,* ***2019****, 170, pp.109 - 114*


# *The human being*

# From hard works in Orange trees and «Horchata» Fields to University Professor Chair along with the Spanish democratic transition

Miguel's mother and father, Maria Jose and Andrea

# *Only family passes above chemistry (not always !)*

# *Loving Husband, Father & Grand Father*

Miguel, Maria Jose


Andrea Maria-Jose Micaela Miguel Ingrid
Happiness, a way of life

Miguel, Sebastian,
Andrea, 2024

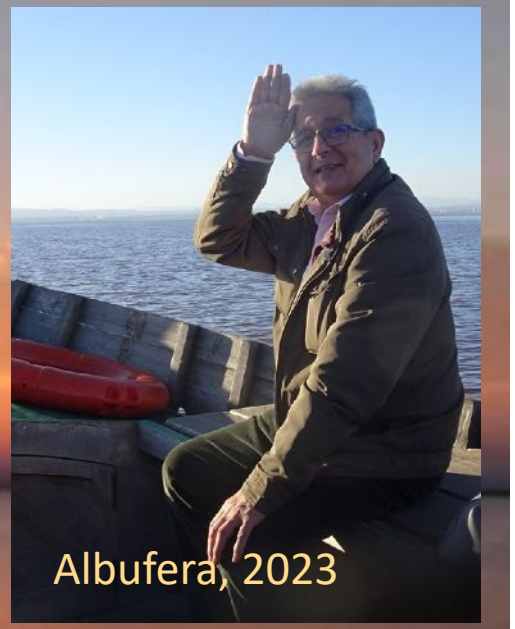
# *Miguel transmitting to his Grand Son, Sebastian*

Exposition in Denia, June 25, 2024, with Sebastian. Complex structures the chemist inspired by the artist

With  Sebastian, grand son

# *Miguel Julve, as good chemist as cook*

# *Miguel enjoying the end of the day*



Albufera, 2023

Albufera, Atardecer, Sunset, 2014


¡Hasta siempre, amigos!

# Links *for more on Miguel Julve*

ICMol Valencia

https://www.uv.es/qcacoor/

Academia Europaea

https://www.ae-info.org/ae/Acad_Main/List_of_Members

Valencia University

https://www.uv.es/uvweb/quimica/ca/novetats-de/Novetat.html?id=128639196552partament/defuncio-professor-miquel-julve-olcina-12859233881718


Polyhedron

Volume 173, 15 November 2019, 114147


*Eugenio Coronado*
*International Conference in Coordination Chemistry*
*(ICCC 2024, Fort Collins, USA)*

# *A tribute to Prof. Miguel Julve, coordination chemist of the Molecular Magnetism*

*24-11-1953*
*9-7-2024*

*with thanks to Michel Verdaguer and Carlos Gómez*

# *Scientific career*

| | |
|---|---|
| *1977* | *Bachelor at Valencia University* |
| *1978* | *Chemistry Degree Valencia University* |
| *1981* | *PhD (Chemistry), Valencia University* |
| *1981-1983* | *Post Doctoral Position* |
| | *Paris-Sud University (Prof. Olivier Kahn)* |

***Valencia University***
***Inorganic Chemistry Department***

| | |
|---|---|
| *1982-1985* | *Assistant Professor assistant* |
| *1985-1992* | *Associate Professor* |
| *1992-2024* | *Full Professor* |

| | |
|---|---|
| *2000-2024* | ***ICMol (2000-2024)*** |

***Publications***

*≈ 620 articles, ≈ 29000 citations;* ***h-index 86***

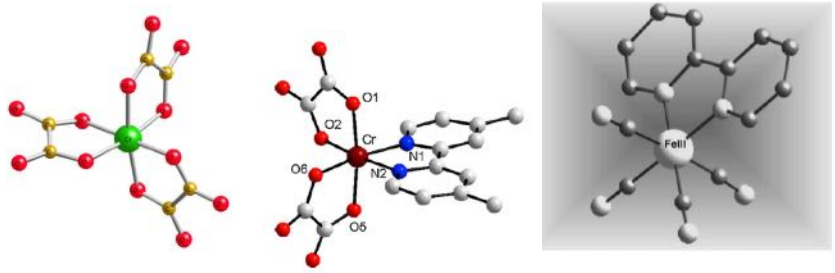
***Awards***

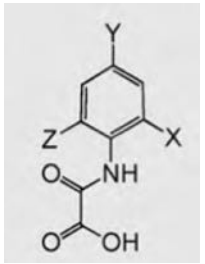
| | |
|---|---|
| *1982* | *Extraordinary doctorate award Univ. Valencia* |
| *2005* | *Inorganic Chemist Prize Spanish Royal Society of Chemistry (RSEQ)* |
| *2008* | *Catalan-Sabatier Prize French Chemical Society (SCF)* |
| *2011* | *Member of the Academia Europaea (Chemical Sciences section)* |
| *2014* | *Doctor Honoris Causa (Bucharest University)* |

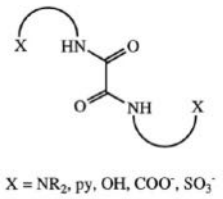
*Miguel Julve developed his research activity in* ***coordination chemistry*** *based on the conception and use of suitable metallo-ligands envisaging the materialization of new tailor-made homo- and heterobimetallic assemblies with tuneable magnetic properties.*

***Magnetochemistry of complexes*** *with potential bis-bidentate spacers such as oxalato, oxamato, oxamidato, 2,2'-biyrimidine, cyanido and functionalized oxamate & oxamidate .*

***Magnetic materials****: Chiral magnets, porous magnets, photomagnetic systems and redox switches …*

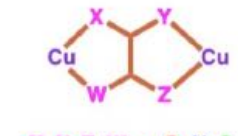


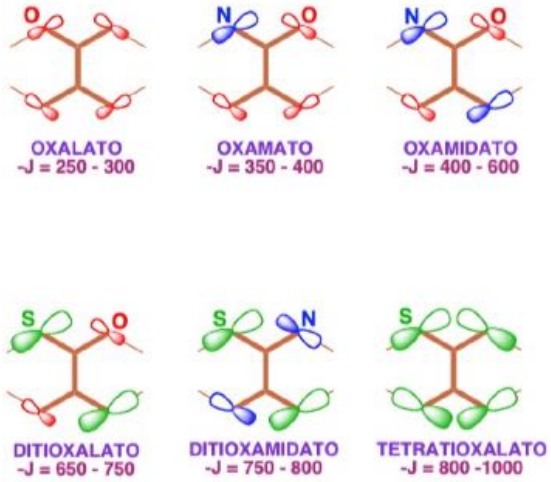




Scheme 2.

**CANJE A TRAVÉS DE PUENTES EXTENDIDOS**

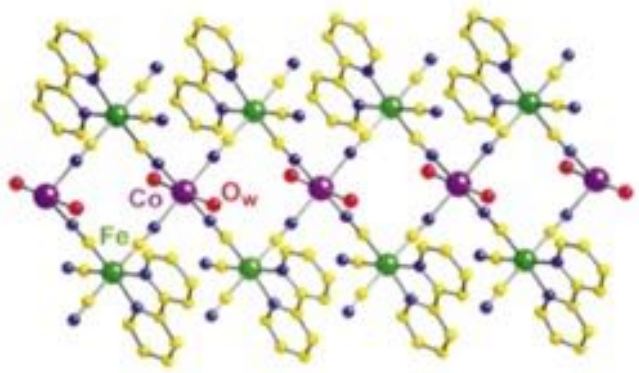



X, Y, Z, W = O, N, S




M. Verdaguer, O. Kahn, M. Julve, A .Gleizes, *Nouv. J. Chim.*, 1985, *9*, 325
S. Alvarez, M. Julve, M. Verdaguer, *Inorg. Chem.*, 1990, 29, 4500
J. Cano, E. Ruiz, P. Alemany, F. Lloret, S. Alvarez, *J. Chem. Soc., Dalton Trans.*, 1999, 1669

# *Announced in 2003 as nanowires, later called single-chain magnets*




**Communications**

VIP

***Magnetic Nanowires***

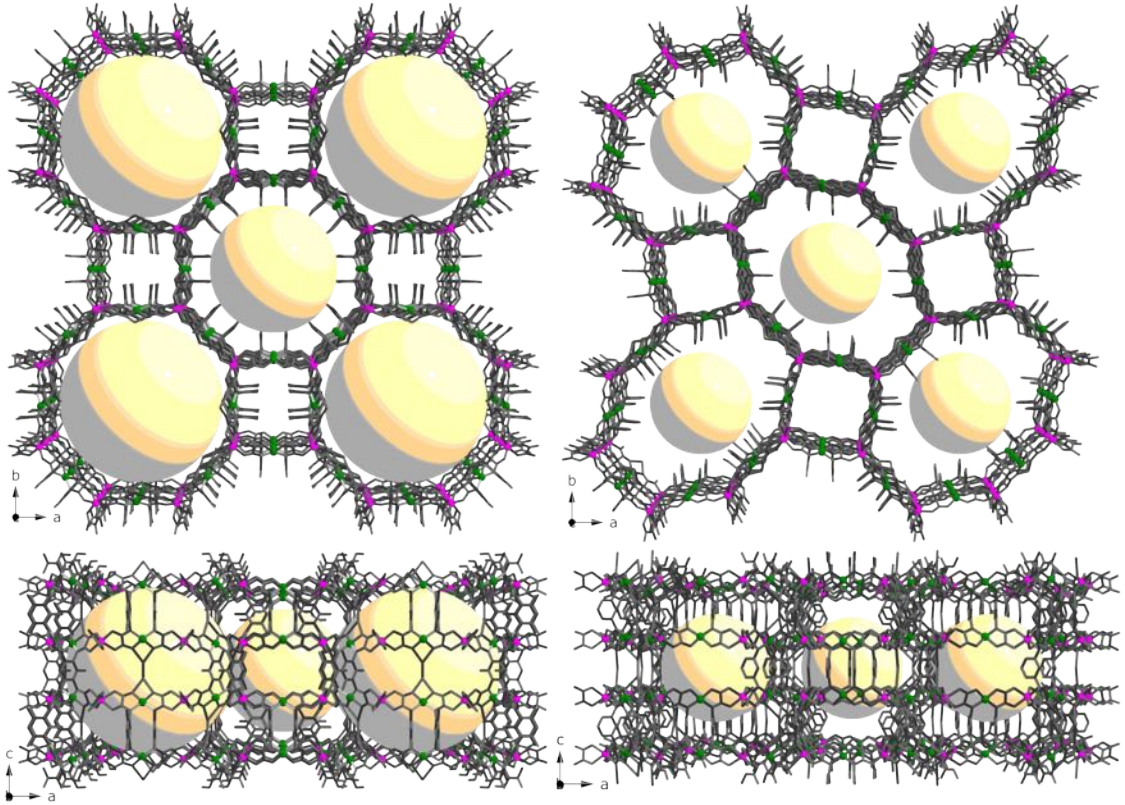
R. Lescouëzec, J. Vaissermann, C. Ruiz-Pérez, F. Lloret, R. Carrasco, M. Julve,* M. Verdaguer,* Y. Dromzee, D. Gatteschi, W. Wernsdorfer 

Cyanide-Bridged Iron(III)–Cobalt(II) Double Zigzag Ferromagnetic Chains: Two New Molecular Magnetic Nanowires

**Keywords:**
chain structures · cobalt · cyanide ligands · ferromagnetism · iron

*Angew. Chem. Int. Ed. 42(13): 1483-1486,* ***2003***

# *Porous Magnets*



J. Ferrando-Soria, *et al., J. Am. Chem. Soc.*, **2012**, **134**, 15301

# *ICMol recognition*

*Miguel Julve and Francesc Lloret Retirement, December 15, 2023*


# *ICMol recognition*

*Miguel Julve and Francesc Lloret Retirement, December 15, 2023*

ICMOL | VNIVERSITAT DE VALÈNCIA | EXCELENCIA MARÍA DE MAEZTU

# Magnetic Coordination Compounds and More... a Long and Successful Story: A Tribute to M. Julve and F. Lloret

- Print Special Issue Flyer
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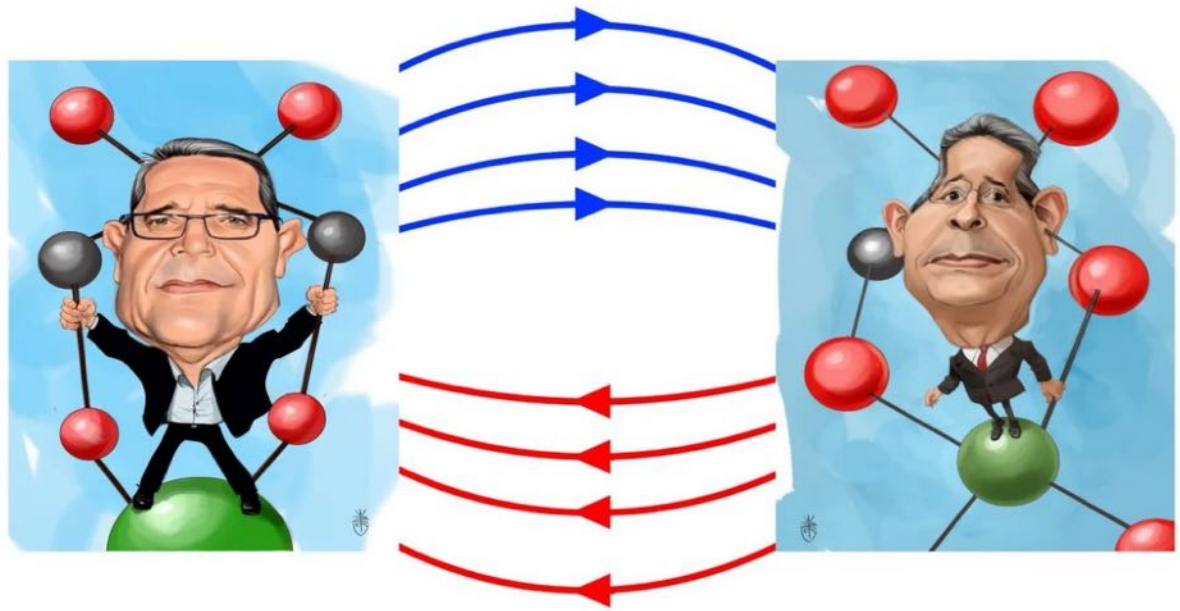
- Keywords
- Published Papers
- Planned Papers



A special issue of ***Magnetochemistry*** (ISSN 2312-7481).

Deadline for manuscript submissions: **1 November 2024** | Viewed by 331

# *Passionated coordination chemist and committed teacher*

*Until the very last lecture…*

*May 2024*

*…and the very last exam*


*21st June 2024*


*"I was lucky and happy to meet Miguel Julve, a creative chemist and scholar, open minded and nice man, thougthful husband and father, faithful friend. Many people, colleagues, coworkers and students have benefitted from his skills, his teaching, his enthusiasm and generosity. »*

*Michel Verdaguer*
*Polyhedron, **2019**, 170, pp.109 - 114*

# *Miguel enjoying the end of the day*

Albufera, 2023

Albufera, Atardecer, Sunset, 2014