Curriculum

Nome Name:	Alberto
Cognome Surname:	CREDI

ORCID:	0000-0003-2546-9801
Scopus Author ID:	7004242502
WOS Author ID:	FZY-4048-2022
Sito WEB WEB site:	https://centri.unibo.it/clan

POSIZIONE PROFESSIONALE ATTUALE / CURRENT PROFESSIONAL POSITION:

Posizione attuale Current position:	In servizio
Qualifica Qualification:	Professore Ordinario (L. 240/10)
Ateneo/Ente/Azienda University/Institution/Company:	Alma Mater Studiorum - Università di BOLOGNA
Nazione Ateneo/Ente/Azienda University/Institution/Company Country:	ITA
Anno inizio Start Year:	2016
Anno fine End Year:	n.d.

PRECEDENTI ESPERIENZE LAVORATIVE (ULTIMI 10 ANNI) / PREVIOUS WORK EXPERIENCE (LAST 10 YEARS):

Qualifica Qualification:	Professore Associato confermato

Ateneo/Ente/Azienda University/Institution/Company	Alma Mater Studiorum - Università di BOLOGNA
Posizione Sede Lavorativi (indicare Nazione e Città) Workplace Location (specify Country and City):	Bologna
Anno inizio Start Year:	2005
Anno fine End Year:	2016
Descrizione Description:	

Qualifica Qualification:	Ricercatore confermato
Ateneo/Ente/Azienda University/Institution/Company	Alma Mater Studiorum - Università di BOLOGNA
Posizione Sede Lavorativi (indicare Nazione e Città) Workplace Location (specify Country and City):	Bologna
Anno inizio Start Year:	1999
Anno fine End Year:	2005
Descrizione Description:	

LINGUE / LANGUAGES:

Lingua Language:	Inglese
Scrittura Writing:	C1
Comunicazione Comunication:	C1

Lingua Language:	Francese
Scrittura Writing:	A1
Comunicazione Comunication:	A1

AREA/SETTORE SCIENTIFICO-DISCIPLINARE / AREA/SECTOR SCIENTIFIC-DISCIPLINARY

Area scientifico-disciplinare	Scienze chimiche

Area scientific-disciplinary:	
Area scientifico-disciplinare codice Area scientific-disciplinary code:	03
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-Chimica generale e inorganica
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-CHEM-03/A

DESCRIZIONE DEI PRINCIPALI RISULTATI SCIENTIFICI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 PUBBLICAZIONI) / DESCRIPTION OF THE MAIN SCIENTIFIC RESULTS ACHIEVED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 PUBLICATIONS):

Descrizione Description:	*AC's research has focused on light-driven molecular systems that operate away from equilibrium, achieving breakthroughs such as photochemically powered molecular pumps—key for artificial energy conversion and smart materials. His work on mechanically interlocked molecules led to advances like kinetic self-sorting, co-conformational allosterism, and controlled sequence isomerism in rotaxanes. He also developed electroactive supramolecular systems and explored precision molecular threading/dethreading, chemically switchable planar chirality, and E-Z isomerization in rotaxanes. He expanded research on semiconductor quantum dots, engineering long luminescence lifetimes via reversible energy transfer, and developed photoswitchable porous crystals for gas adsorption control. His studies on photochromic systems included modulating behavior through molecular threading and encapsulation, as well as controlling fullerene bis-adduct regiochemistry. He also investigated molecular switches in bilayer membranes and advanced single-molecule and thin-film studies. In 2016 AC earned an ERC Advanced Grant as a PI and in 2017 he founded the Center for Light Activated Nanostructures (CLAN), fostering interdisciplinary research in light-responsive materials. With over 330 publications (h-index 77, 32,000+ citations), AC remains a leading figure in molecular machines and photochemistry, delivering influential reviews and receiving prestigious awards while actively engaging in science outreach.*

PUBBLICAZIONI / PUBLICATIONS:

Anno della pubblicazione Year of publication:	2015
Citazione Citation:	RAGAZZON, GIULIO, BARONCINI, MASSIMO, SILVI, SERENA, VENTURI, MARGHERITA, CREDI, ALBERTO (2015). Light-powered autonomous

	and directional molecular motion of a dissipative self-assembling system. NATURE NANOTECHNOLOGY, vol. 10, p. 70-75, ISSN: 1748-3387, doi: 10.1038/nnano.2014.260

Anno della pubblicazione Year of publication:	2015
Citazione Citation:	BARONCINI, MASSIMO, D'AGOSTINO, SIMONE, BERGAMINI, GIACOMO, CERONI, PAOLA, Comotti, A., Sozzani, P., Bassanetti, I., GREPIONI, FABRIZIA, Hernandez, T. M., SILVI, SERENA, VENTURI, MARGHERITA, CREDI, ALBERTO (2015). Photoinduced reversible switching of porosity in molecular crystals based on star-shaped azobenzene tetramers. NATURE CHEMISTRY, vol. 7, p. 634-640, ISSN: 1755-4330, doi: 10.1038/nchem.2304

Anno della pubblicazione Year of publication:	2024
Citazione Citation:	Neira, Iago, Taticchi, Chiara, Nicoli, Federico, Curcio, Massimiliano, Garcia, Marcos D., Peinador, Carlos, Silvi, Serena, Baroncini, Massimo, Credi, Alberto (2024). Light-driven ratcheted formation of diastereomeric host-guest systems. CHEM, vol. 11, p. 1-10, ISSN: 2451-9294, doi: 10.1016/j.chempr.2024.11.013

Anno della pubblicazione Year of publication:	2022
Citazione Citation:	Corra, Stefano, Bakić, Marina Tranfić, Groppi, Jessica, Baroncini, Massimo, Silvi, Serena, Penocchio, Emanuele, Esposito, Massimiliano, Credi, Alberto (2022). Kinetic and energetic insights into the dissipative non-equilibrium operation of an autonomous light-powered supramolecular pump. NATURE NANOTECHNOLOGY, vol. 17, p. 746-751, ISSN: 1748-3395, doi: 10.1038/s41565-022-01151-y

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Canton, Martina, Groppi, Jessica, Casimiro, Lorenzo, Corra, Stefano, Baroncini, Massimo, Silvi, Serena, Credi, Alberto (2021). Second-Generation Light-Fueled Supramolecular Pump. JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 143, p. 10890-10894, ISSN: 0002-7863, doi: 10.1021/jacs.1c06027

Anno della pubblicazione Year of publication:	2018
Citazione Citation:	LA ROSA, MARCELLO, Denisov, Sergey A., Jonusauskas, Gediminas, McClenaghan, Nathan D., Credi, Alberto (2018). Designed Long-Lived Emission from CdSe Quantum Dots through Reversible Electronic Energy Transfer with a Surface-Bound Chromophore. ANGEWANDTE CHEMIE. INTERNATIONAL EDITION, vol. 57, p. 3104-3107, ISSN: 1433-7851, doi: 10.1002/anie.201712403

Anno della pubblicazione Year of publication:	2022
Citazione Citation:	Nicoli, Federico, Curcio, Massimiliano, Tranfić Bakić, Marina, Paltrinieri, Erica, Silvi, Serena, Baroncini, Massimo, Credi, Alberto (2022). Photoinduced Autonomous Nonequilibrium Operation of a Molecular Shuttle by Combined Isomerization and Proton Transfer Through a Catalytic Pathway. JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 144, p. 10180-10185, ISSN: 1520-5126, doi: 10.1021/jacs.1c13537

Anno della pubblicazione Year of publication:	2019
Citazione Citation:	Corra, Stefano, de Vet, Christiaan, Groppi, Jessica, La Rosa, Marcello, Silvi, Serena, Baroncini, Massimo, Credi, Alberto (2019). Chemical On/Off Switching of Mechanically Planar Chirality and Chiral Anion Recognition in a [2]Rotaxane Molecular Shuttle. JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 141, p. 9129-9133, ISSN: 0002-7863, doi: 10.1021/jacs.9b00941

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Curcio, Massimiliano, Nicoli, Federico, Paltrinieri, Erica, Fois, Ettore, Tabacchi, Gloria, Cavallo, Luigi, Silvi, Serena, Baroncini, Massimo, Credi, Alberto (2021). Chemically Induced Mismatch of Rings and Stations in [3]Rotaxanes. JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 143, p. 8046-8055, ISSN: 0002-7863, doi: 10.1021/jacs.1c02230

Anno della pubblicazione Year of publication:	2020
Citazione Citation:	Groppi, Jessica, Casimiro, Lorenzo, Canton, Martina, Corra, Stefano, Jafari-Nasab, Mina, Tabacchi, Gloria, Cavallo, Luigi, Baroncini, Massimo, Silvi, Serena, Fois, Ettore, Credi, Alberto (2020). Precision molecular threading/dethreading. ANGEWANDTE CHEMIE. INTERNATIONAL EDITION, vol. 59, p. 14825-14834, ISSN: 1433-7851, doi: 10.1002/anie.202003064

DESCRIZIONE DEI PRINCIPALI PROGETTI DI RICERCA E PREMI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PRINCIPAL INVESTIGATOR O COORDINATORE LOCALE DI PROGETTI DI RICERCA COMPETITIVI NAZIONALI O INTERNAZIONALI, SIGNIFICATIVI PREMI CONSEGUITI PER LA PROPRIA ATTIVITÀ DI RICERCA)/ DESCRIPTION OF THE MAIN RESEARCH PROJECTS AND AWARDS AWARDED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 ACHIEVEMENTS, INCLUDING, FOR EXAMPLE, PRINCIPAL

INVESTIGATOR OR LOCAL COORDINATOR OF NATIONAL OR INTERNATIONAL COMPETITIVE RESEARCH PROJECTS, SIGNIFICANT AWARDS AWARDED FOR YOUR RESEARCH ACTIVITY):

Descrizione Description:	*In the past 10 years, AC has had roles of scientific responsibility in 10+ national and international grants, earning >4mln EUR funding through competitive calls. These grants focused on the development of supramolecular motors and machines, molecular-based functional materials, and nanostructured materials. AC has received numerous awards and lectureships, including the Lamberto Malatesta Prize (Divisione di Chimica Inorganica, Società Chimica Italiana, 2023), the Holger Erdtman Lecture (Royal Institute of Technology, Sweden, 2022), the French-Italian Prize (Société Chimique de France, 2021), the Netherlands Scholar Award for Supramolecular Chemistry (2021), the Christmas Lecture of the Area Roma 1 CNR (2019), the Riccardo Ferro Lectureship (Università di Genova, 2019, the Bologna-Brown Lectureship (Università di Bologna-Brown University, 2018) and the Enrico Santoro Award (Accademia Nazionale dei Lincei, 2016)*

Descrizione Description:	Partner leader - Horizon Europe, MSCA DN: MonaLisa-Motorised nanomachines: fundamentals, innovations, applications (48 months, 1/12/2024-30/11/2028)

Descrizione Description:	National coordinator - MUR-PRIN 2022: COSMO-Controlled shuttling inside artificial molecular tubes (24 months, 16/10/2023-15/10/2025)

Descrizione Description:	Partner leader - Horizon2020, MSCA ITN: ArtMoMa-Artificial molecular machines (48 months, 1/3/2020-28/2/2023)

Descrizione Description:	National coordinator - MIUR-PRIN 2017: NEMO-Next generation of molecular and supramolecular machines: towards functional nanostructured devices, interfaces, surfaces and materials (36 months, 1/5/2019-30/4/2022)

Descrizione Description:	Partner leader - Horizon2020, FET-OPEN: MAGNIFY-From nano to macro: a groundbreakIng actuation technology for robotic systems (48 months, 1/10/2018-30/9/2022)

Descrizione Description:	Principal investigator - MIUR-FARE 2017: AMPLI-Amplification of nanometer movements at larger scales: towards molecule-based artificial muscles (60 months, 1/1/2018-31/12/2022)

Descrizione Description:	Principal investigator - Horizon2020, ERC Advanced Grant: LEAPS-Light effected autonomous molecular pumps: towards active transporters and actuating materials (72 months, 1/10/2016-30/9/2022)

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SVILUPPO DI RETI E RELAZIONI SCIENTIFICHE NAZIONALI E INTERNAZIONALI (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PARTECIPAZIONE O ORGANIZZAZIONE DI CONVEGNI NAZIONALI E INTERNAZIONALI; CONTRIBUTI A CONSORZI DI RICERCA) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF DEVELOPMENT OF NATIONAL AND INTERNATIONAL SCIENTIFIC NETWORKS AND RELATIONS (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, PARTICIPATION OR ORGANIZATION OF NATIONAL AND INTERNATIONAL CONFERENCES; CONTRIBUTIONS TO RESEARCH CONSORTIA):

Descrizione Description:	*He has been member of the scientific and/or organising committee of >40 national and international conferences, including (in the past decade): Mach-5 2022 (co-chair), 2024 (co-chair); International Conference on Coordination Compounds, 2018, 2022 (session organiser); EuCheMS Congress, 2018 (convenor); 3rd Telluride Conference on Molecular Rotors, Motors and Switches, 2018 (chair); 8th International Symposium on Photochromism, 2016; Congresso Nazionale di Chimica Inorganica, 2015, 2016, 2018 (chair); Faraday Discussion on Supramolecular Photochemistry, 2015; Italian Photochemistry Meeting, 2014-2020; International Conference on Molecular Electronics-ELECMOL, France, 2016. He has been actively engaged in scientific societies and networks, also with leading roles. He is Fellow of the Royal Society of Chemistry and of the European Academy of Science, and member of Società Chimica Italiana and American Chemical Society. In the past decade he has been invited to speak at 50 international and national conferences, with 19 plenary/keynote lectures. He has delivered invited seminars at 28 institutes in Universities, public or private research centers, and companies.*

Descrizione Description:	President, Gruppo Italiano di Fotochimica, 2015-2017 and 2018-2020 elective mandates

Descrizione Description:	Board member, Inorganic Chemistry division of the Italian Chemical Society, 2015-2017 and 2018-2020 elective mandates (treasurer office in 2015-2016)

Descrizione Description:	Member, International Relations Committee, the Italian Chemical Society, 2017-2019

Descrizione Description:	Member, Executive Committee, European Photochemistry Association, 2018-2023

Descrizione Description:	Chair of the Organizing Committee, 46° Congresso Nazionale di Chimica Inorganica, Bologna, 2018

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SUPPORTO ALLA COMUNITÀ SCIENTIFICA (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, RESPONSABILITÀ DI DIREZIONE DI COMITATI EDITORIALI; INCARICHI DI VALUTAZIONE DELLA RICERCA PRESSO ISTITUZIONI NAZIONALI O INTERNAZIONALI; RESPONSABILITÀ ISTITUZIONALI ALL'INTERNO DELL'ISTITUZIONE DI APPARTENENZA O DI ALTRE ISTITUZIONI) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF SUPPORT TO THE SCIENTIFIC COMMUNITY (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, MANAGEMENT RESPONSIBILITIES OF EDITORIAL COMMITTEES; RESEARCH EVALUATION ROLES AT NATIONAL OR INTERNATIONAL INSTITUTIONS; INSTITUTIONAL RESPONSIBILITIES WITHIN THE INSTITUTION OF AFFILIATION OR OTHER INSTITUTIONS):

Descrizione Description:	*AC has ample experience in research assessment panels: MIUR (SIR, PRIN, VQR), ERC (AdG, SyG, StG, CoG), FP7 ICT-FET Program, ESF Eurocores Program, Leverhulme Trust, International Center for Frontier Research in Chemistry (Strasbourg), Science Foundation Ireland, Royal Society of New Zealand, Netherlands Organization for Scientific Research, Israel Science Foundation, Swiss National Science Foundation, Petroleum Research Fund-American Chemical Society, Agence Nationale de la Recherche, Université Franco-Italienne, Università di Padova. He has been member of numerous recruitment committees and PhD committees in Italy and abroad. He is member of the board of the Fondation de la Maison de la Chimie (Paris, since 2014), Fondazione Heal Italia (Palermo, PNRR PE6, since 2022), and Fondazione Cassa di Risparmio in Bologna (since 2025). In 2022-2023, as a Vice Rector for Research, he has been the co-founder of the CoARA Italian National Chapter.*

Descrizione Description:	Vice Rector for Research, Alma Mater Studiorum - Università di Bologna, 2021-2024

Descrizione Description:	Associate research director, Consiglio Nazionale delle Ricerche, 2017-now

Descrizione Description:	Chair of the Committee for Research Evaluation (Valutazione della Ricerca di Ateneo), Alma Mater Studiorum - Università di Bologna, 2021-2024

Descrizione Description:	Guest Editor of a themed issue of the journal Topics in Current Chemistry (Springer) entitled Photoactive semiconductor nanocrystal quantum dots: fundamentals and applications, 2016

DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI VALORIZZAZIONE DELLE CONOSCENZE (CON ANNESSO ELENCO DI MASSIMO 3 RISULTATI, RELATIVI ALLA PARTECIPAZIONE DEL CANDIDATO ALLE ATTIVITÀ DI VALORIZZAZIONE DELLE CONOSCENZE) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF KNOWLEDGE VALORIZATION (WITH ATTACHED LIST OF MAXIMUM 3 RESULTS, RELATING TO THE CANDIDATE'S PARTICIPATION IN KNOWLEDGE VALORIZATION ACTIVITIES):

Descrizione Description:	*Since the beginning of his career, AC has been engaged in the dissemination of chemistry and of scientific culture in general. He is the co-author (together with V. Balzani) of the popular science book "Le macchine molecolari" (1088press, 2018, 88 pages, ISBN 978-88-31926-02-7), translated in English in 2020 and finalist in the 2018 edition of the Premio Nazionale di Divulgazione Scientifica "Giancarlo Dosi". He is the co-author (together with A. Del Zotto, A. Gasparotto, F. Marchetti and D. Zuccaccia) of the textbook "Viaggio nella Chimica" (EdiSES, Napoli), 2022, 498 pages, ISBN 883623111X). He has been a participant and active supporter of the European Researchers' Night since its inception. In the past decade he has collaborated with two companies through contracts of research consultancy.*

Descrizione Description:	A. Credi, S. Silvi, T. Avellini, C. Lincheneau, E. C. Constable, "Method for controlling solubility of quantum dots", Italian Patent Application No. RM2013A000269, May 2013; PCT/IB2014/061230, May 2014. Italian Patent Number 1417536 released on 18/8/2015.

Descrizione Description:	Invited lecture to the Cagliari Science Festival, 2019

Descrizione Description:	Contract as a research consultant with Bracco S.p.A, 2017

Informazioni aggiornate alla data di candidatura 02-05-2025

Alberto CREDI

Il presente curriculum costituisce allegato e parte integrante dell'incarico sottoscritto