

Curriculum



Nome Name:	STEFANO
Cognome Surname:	CORRA'

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POSIZIONE PROFESSIONALE ATTUALE / CURRENT PROFESSIONAL POSITION:

Posizione attuale Current position:	In servizio
Qualifica Qualification:	Ricercatore a t.d.-t.pieno (L. 79/2022)
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:	2025
Anno fine End Year:	n.d.

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

Qualifica Qualification:	Ricercatore a t.d. - t.pieno (art. 24 c.3-a L. 240/10)
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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):	n.d.
Anno inizio Start Year:	2022
Anno fine End Year:	2025
Descrizione Description:	

LINGUE / LANGUAGES:

Lingua Language:	Inglese
Scrittura Writing:	C2
Comunicazione Communication:	C1

Lingua Language:	Italiano
Scrittura Writing:	madrelingua
Comunicazione Communication:	madrelingua

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

Area scientifico-disciplinare Area scientific-disciplinary:	Scienze chimiche
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:	<i>I explored the use of peptides as scaffolds for nanostructures self-assembly gaining deep knowledge on the interplay between structure, conformation and function and in the exploitation of supramolecular interactions for controlling the folding and the assembly. In particular, I reported fundamental studies on the effect of structure (peptide residues and length) and conformation (spatial arrangement of side chains) on the resulting superstructure held together by pi-pi stacking interactions (ACIE 2016, CEJ 2018, ChemSci 2019). On top of that, I studied the effects of weak interactions to control the assembly into interwoven topologies (NatChem 2017). In the field of photochemistry and light responsive systems, I studied photochemically operated molecular machines, performing qualitative and quantitative analysis of several physicochemical parameters of dissipative photochemical systems. Specifically, I reported on the characterization of autonomous supramolecular pumps (JACS, CEJ 2021) and our studies contributed to validate a novel theoretical framework on reaction networks involving thermal and photochemical reactions (NatNano 2022). More generally, in the field of switchable systems explored the stereodynamic properties of switchable rotaxanes for chirality and isomerization (JACS 2019, Chem 2021) as well as designing and operating a switchable rotaxane encompassing two weak stations which can be populated at will (ChemComm 2023). This experience is highly significant in the fields of stimuli-responsive systems and systems chemistry.</i>
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PUBBLICAZIONI / PUBLICATIONS:

Anno della pubblicazione Year of publication:	2023
Citazione Citation:	Bukhtiarova N., Credi A., Corra' S. (2023). Controlling molecular shuttling in a rotaxane with weak ring recognition sites. CHEMICAL COMMUNICATIONS, vol. 59, p. 13159-13162, ISSN: 1359-7345, doi: 10.1039/d3cc04483a
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
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Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Corra, Stefano, Casimiro, Lorenzo, Baroncini, Massimo, Groppi, Jessica, La Rosa, Marcello, Tranfic Bakic, Marina, Silvi, Serena, Credi, Alberto (2021). Artificial supramolecular pumps powered by light. CHEMISTRY-A EUROPEAN JOURNAL, vol. 27, p. 11076-11083, ISSN: 0947-6539, doi: 10.1002/chem.202101163

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Corra, Stefano, de Vet, Christiaan, Baroncini, Massimo, Credi, Alberto, Silvi, Serena (2021). Stereodynamics of E/Z isomerization in rotaxanes through mechanical shuttling and covalent bond rotation. CHEM, vol. 7, p. 2137-2150, ISSN: 2451-9294, doi: 10.1016/j.chempr.2021.04.010

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:	2019
Citazione Citation:	Ochs N. A. K., Lewandowska U., Zajaczkowski W., Stefano Corra, Reger S., Herdlitschka A., Schmid S., Pisula W., Mullen K., Bauerle P., Wennemers H. (2019). Oligoprolines guide the self-assembly of quaterthiophenes. CHEMICAL SCIENCE, vol. 10, p. 5391-5396, ISSN: 2041-6520, doi: 10.1039/c8sc05742g

Anno della pubblicazione Year of publication:	2018
Citazione Citation:	Lewandowska U., Stefano Corra, Zajaczkowski W., Ochs N. A. K., Shoshan M. S., Tanabe J., Stappert S., Li C., Yashima E., Pisula W., Mullen K., Wennemers H. (2018). Positional Isomers of Chromophore-Peptide Conjugates Self-Assemble into Different Morphologies. CHEMISTRY-A EUROPEAN JOURNAL, vol. 24, p. 12623-12629, ISSN: 0947-6539, doi: 10.1002/chem.201801545

Anno della pubblicazione Year of publication:	2017
Citazione Citation:	U. Lewandowska, W. Zajaczkowski, Stefano Corrà, Tanabe J., Borrmann R., Benetti E. M., Stappert S., Watanabe K., Ochs N. A. K., Schaeublin R., Li Chen., Yashima E., Pisula W., Mullen K., Wennemers H. (2017). A triaxial supramolecular weave. NATURE CHEMISTRY, vol. 9, p. 1068-1072, ISSN: 1755-4330, doi: 10.1038/NCHEM.2823

Anno della pubblicazione Year of publication:	2016
Citazione Citation:	Stefano Corra, Lewandowska U., Benetti E. M., Wennemers H. (2016). Size-Controlled Formation of Noble-Metal Nanoparticles in Aqueous Solution with a Thiol-Free Tripeptide. ANGEWANDTE CHEMIE. INTERNATIONAL EDITION, vol. 55, p. 8542-8545, ISSN: 1433-7851, doi: 10.1002/anie.201510337

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:	<i>PROJECTS 2023 - PRIN evaluated 87. Role: Deputy Project Coordinator; Funded: 238223 €. AWARDS 2024 - Best presentation at the "Top Ten 2024" event organized by the "Accademia delle Scienze dell'Istituto di Bologna". 2024 - NEST PRIZE 2022. Awarded by the National Enterprise for nanoScience and nanoTechnology (NEST) of the "Scuola Normale Superiore di Pisa" for outstanding research results in the field of nanotechnology. 2023 - "Franco Scandola" GIF Young Investigator Award. Awarded by the Italian Photochemistry Group (GIF) to a young (< 35) researcher who works in an Italian institution in recognition of outstanding research results in the field of photochemistry and photophysics. 2019 - Honour Mention at the "Primo Levi Award" of the Italian Chemical Society. Given by the young fellows of the Italian Chemical Society (SCI) to a young (< 35) researcher for an outstanding research contribution carried out at an Italian</i>
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	<p>university or research institute. 2016 - Conference Fellowship to the European Peptide Symposium (Leipzig, DE). This is the main European conference for peptide chemistry, fellowships were given to a restricted selection (43) of the attendees (> 600). 2016 - Poster selected for a flash presentation at the European Peptide Symposium (Leipzig, DE). Flash presentations were chosen between over 400 poster presenters. 2015 - Poster Prize at the International Symposium of Macrocyclic and Supramolecular Chemistry-ISMSC (Strasbourg, FR). This is the main conference of the supramolecular chemistry community. The conference regularly hosts over 400 poster presentations among which the awardee is chosen. 2014 - Conference Fellowship to the Ischia Advanced School of Organic Chemistry (Ischia, IT). Fellowships to attend were given to a restricted selection of the young participants (< 10%).</p>
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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:	
Descrizione Description:	2024 Member of the organizing committee of the "Molecular Machines: Making Measuring Modelling - Mach-5" (Bertinoro, IT) 1-4 settembre 2024.
Descrizione Description:	2023 Keynote lecture at the Italian Photochemistry Meeting (Sestri Levante, IT). The lecture is given to the recipient of the GIF Young Investigator Award in recognition of the outstanding contributions to the photochemistry field.
Descrizione Description:	2023 Keynote lecture at the System Chemistry in Italy Symposium (Rome, IT). This symposium includes a selection of the emerging investigators in the field of system chemistry in

	Italy.
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Descrizione Description:	2023 Plenary lecture at the ArtMoMa Workshop on Stimuli Responsive and Dynamic Systems and Materials (Bologna, IT). Spring school organized by the young scholars involved in the "Artificial Molecular Machine - ArtMoMa" MSCA-ITN. The invitation came from the PhD students involved in the network to young and established PI working in fields connected to the theme of the school.
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Descrizione Description:	2022 Keynote lecture at the Mach-5 conference (Plön, DE). The conference was at its first edition and the speakers were a restricted selection of young (non-tenured) emerging investigators in the field of molecular machines and out-of-equilibrium systems.
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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:	
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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):

<p>Descrizione Description:</p>	<p><i>The PI is co-author of 19 papers in top ranking journals, including Angew. Chem. (2), J. Am. Chem. Soc. (2), Nat. Chem., Nat. Nanotechnol., Adv. Mater.; in over 50% he is first or corresponding author. The PI has been actively involved in the dissemination of his research results since the PhD, he presented contributions to 25 national and international conferences, meetings, and symposia. Among others, the ISMSC (2015, 2018, and 2019), where he was also awarded a poster prize, the European Peptide Symposium (2016), where he was awarded a conference fellowship and his poster was selected for a flash oral communication. He also attended as a staff member the prestigious Burgenstock Conference on Stereochemistry (2016), held in Brunnen (CH), where he also brought a poster contribution. Oral contributions were given at the general and division meetings of the Swiss Chemical Society (2016) and of the Italian Chemical Society (2018) of which the PI is or has been member. The PI is also member of the organizing committee of the next Mach-5 conference which will be held in Bertinoro (IT) in 2024. Since 2015 he regularly serves as reviewer for journals such as Nature Communications, Nature Reviews Methods Primer, Nature Chemistry, New Journal of Chemistry.</i></p> <p><i>MENTORING The PI is actively involved in mentoring having supervised or co-supervised 5 PhD students and 6 undergraduates internships and Master thesis as well as 2 postdoctoral fellows. He was also referee of one PhD thesis and member of the Master thesis defense committee for the MSc in Industrial Chemistry during academic year 2021-2022 (each member acts as an opponent during the mandatory defense, which involves a 30 min discussion).</i></p> <p><i>TEACHING ACTIVITY The PI has been involved in teaching activities since the PhD, first as teaching assistant for 5 semesters overall (three at ETHZ and two at the University of Bologna). Upon becoming faculty member in 2021 he is responsible for two courses at the University of Bologna, for a total of 66 hours of teaching per academic year.</i></p>
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Informazioni aggiornate alla data di candidatura 03-06-2025

STEFANO CORRA'

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