Curriculum Vitae di Elisabetta Rombi

FORMAZIONE

Ottobre 1990: Dottorato di Ricerca in Ingegneria Chimica, Università di Cagliari

Aprile 1986: Laurea Magistrale in Chimica Industriale, Università di Cagliari

PUBBLICAZIONI E INDICI BIBLIOMETRICI (SCOPUS)

89 articoli, H-index 29, 2223 citazioni

PARAMETRI ASN

N. elaborati (10 anni): 37(30*)

Indice H (15 anni): 21(18*)

Citazioni (15 anni): 1196(898*)

*Soglia Valori soglia Professore Ordinario SSD CHEM-04/A – CHIMICA INDUSTRIALE

POSIZIONI LAVORATIVE

2019-presente: Professore Associato di Chimica Industriale, Università di Cagliari

1991-2019: Ricercatore a tempo indeterminato di Chimica Industriale, Università di Cagliari

PROGETTI FINANZIATI (responsabile scientifico (SR), partecipante (P))

2023 – Eni S.p.A. – Combining highly porous materials with polymerizable ionic liquid-based membranes for selective CO_2 capture from dilute CO_2 streams – P

2023 – ENEA – within the Hydrogen Technologies Integrated Project–Power to fuels: synthesis and physico-chemical characterization of new materials – P

2022–MASE-PROduction of green H_2 from sea water via innovative high temperature electrolyser with integration in power-to-METhanol process (PROMETH₂US) – P

PRIN PNRR 2022 – Combining natural polymer-based hydrogel/aerogel with highly porous materials for selective CO_2 capture from gaseous stream – P

PRIN 2022 – Switching from petro-based to bio-based chemistry: deoxydehydration reaction as versatile tool for the production of olefins from natural polyols (P2BDODH) – SR

PNRR 2022–Ecosystem of innovation for Next generation Sardinia-Spoke 7-Green fuels and carbon sequestration – P

FdS 2021 – Sorbents for environmental applications: a synergetic computational modeling and experimental approach – P

FdS 2019 – Surface Tailored Materials for Sustainable Environmental Applications – P

COMPETENZE PRINCIPALI

Deposizione di fasi attive su supporti. Fisisorbimento di N_2, chemisorbimento di H_2/CO, microcalorimetria di adsorbimento, TPD/R/O. Test di attività di catalizzatori/sorbenti solidi. GC, GC-MS, HPLC.

PRINCIPALI TEMI DI RICERCA

Sviluppo di materiali micro e mesoporosi; processi catalitici eterogenei; processi di adsorbimento selettivo/reattivo per la rimozione di inquinanti da correnti gassose e liquide.

PUBBLICAZIONI SU PROCESSI DI RIMOZIONE DI INQUINANTI

1) M. Mureddu, I. Ferino, A. Musinu, A. Ardu, E. Rombi, M.G. Cutrufello, P. Deiana, M. Fantauzzi, C. Cannas. MeO_x/SBA-15 (Me = Zn, Fe): highly efficient nanosorbents for mid-temperature H_2S removal, J. Mater. Chem. A 2 (2014) 19396-19406, DOI: 10.1039/c4ta03540b.

2) C. Cara, E. Rombi, A. Musinu, V. Mameli, A. Ardu, M. Sanna Angotzi, L. Atzori, D. Niznansky, H. Xin, C. Cannas. MCM-41 support to ultrasmall γ-Fe_2O_3 nanoparticles for H_2S removal, J. Mater Chem. A 5 (2017) 21688-21698, DOI: 10.1039/c7ta03652c.

3) C. Cara, E. Rombi, V. Mameli, A. Ardu, M. Sanna Angotzi, D. Niznansky, A. Musinu, Carla Cannas. γ-Fe_2O_3-M41S Sorbents for H_2S Removal: Effect of Different Porous Structures and Silica Wall Thickness, J. Phys. Chem. C 122 (2018) 12231-12242, DOI: 10.1021/acs.jpcc.8b01487.

4) C. Cara, E. Rombi, A. Ardu, M. A. Vacca, C. Cannas. Sub-micrometer MCM-41 particles as support to design efficient and regenerable maghemite-based sorbent for H_2S removal, Journal of Nanoscience and Nanotechnology 19(8) (2019) 5035-5042, DOI: 10.1166/jnn.2019.16800.

5) C. Cara, V. Mameli, E. Rombi, N. Pinna, M. Sanna Angotzi, D. Nižňanský, A. Musinu, C. Cannas. Anchoring ultrasmall FeIII-based Nanoparticles on Silica and Titania Mesostructures for Syngas H_2S Purification, Microporous and Mesoporous materials, 298 (2020) 110062. DOI:10.1016/j.micromeso.2020.110062.

6) B.L.C. Santos, P. Parpot, O.S.G.P. Soares, M.F.R. Pereira, E. Rombi, A.M. Fonseca, I. Correia Neves. Fenton-Type Bimetallic Catalysts for Degradation of Dyes in Aqueous Solutions, Catalysts 2021, 11(1), 32; DOI:10.3390/catal11010032.

7) Z. Bencheqroun, N.E. Sahin, O.S.G.P. Soares, M.F.R.Pereira, H. Zaitan, M. Nawdali, E. Rombi, A.M. Fonseca, P. Parpot, I.C. Neves. Fe(III)-exchanged zeolites as efficient electrocatalysts for

Fenton-like oxidation of dyes in aqueous phase, Journal of Environmental Chemical Engineering, 2022, 10, 107891; DOI: 10.1016/j.jece.2022.107891.

8) O. Assila, Ó. Barros, Antó.M.F. Fonseca, P. Parpot, Olí.S.G.P. Soares, M.F.R. Pereira, F. Zerrouq, A. Kherbeche, E. Rombi, T. Tavares, I.C. Neves. Degradation of pollutants in water by Fenton-like oxidation over LaFe-catalysts: Optimization by experimental design, Microporous and Mesoporous Materials 349 (2023) 112422, DOI: https://doi.org/10.1016/j.micromeso.2022.112422.

9) O. Assila, Z. Bencheqroun, E. Rombi, T. Valente, A.S. Braga, H. Zaitan, A. Kherbeche, O. S.G.P. Soares, M.F.R. Pereira, A.M. Fonseca, P. Parpot, Isabel C. Neves. Raw clays from Morocco for degradation of pollutants by Fenton-like reaction for water treatment. Colloids and Surfaces A: Physicochemical and Engineering Aspects 679 (2023) 132630. DOI: https://doi.org/10.1016/j.colsurfa.2023.132630.

10) Óscar Barros, Pier Parpot, Elisabetta Rombi, Teresa Tavares, Isabel C. Neves. Machine learning approach for classification of REE/Fe-zeolite catalysts for Fenton-like reaction. Chemical Engineering Science 285 (2024) 119571. https://doi.org/10.1016/j.ces.2023.119571.