

Brevetti:

1. **IT 02022000027090** (presentato il 29/12/2022) Titolo: Metodo e dispositivo per la rilevazione di fenilalanina in campioni biologici. Petralia Salvatore, Forte Giuseppe, Andò Bruno, Messina Maria Anna, Maugeri Ludovica, Spoto Guido, Puccio Riccardo, Faga Massimo, Verardo Roberto

Pubblicazioni scientifiche:

1. Maria Anna Messina, Ludovica Maugeri, Giuseppe Forte, Martino Ruggieri and Salvatore Petralia. A highly sensitive colorimetric approach based on tris(bipyridine)Ruthenium (II/III) mediator for the enzymatic detection of Phenylalanine. *Frontiers in Chemistry* **2023** 11:1164014.
2. L. Maugeri, G. Forte, M. A. Messina, M. Camarda, G. Ventimiglia, G. M. Letizia Consoli, and S. Petralia, Photochemical Synthesis of β -Cyclodextrin/Cobalt Oxide Nanoparticles as Photothermal Agents for Photothermal-Induced Enzymatic Reaction, *ACS Appl. Nano Mater.* **2022**, 5, 8, 10167–10173,
3. Ludovica Maugeri, Maria Anna Messina, Martino Ruggieri, and Salvatore Petralia, A Highly Sensitivity Photothermal-Contrast Method based on Gold Nanostructures for Enzymatic Phenylalanine Detection. *Chem Comm* **2023** (sottomesso)
4. Elisabetta Anna Tendi, Maria Guarnaccia, Giovanna Morello and Sebastiano Cavallaro The Utility of Genomic Testing for Hyperphenylalaninemia. *J. Clin. Med.* 2022, 11, 1061.
5. Ando B., Baglio S., Castorina S., Graziani S., Tondepu S.V.G., Petralia S., Messina M.A., Maugeri L., Neri G., Ferlazzo A., A Capacitive Sensor, Exploiting a YSZ Functional Layer, for Ammonia Detection, (**2022**) *IEEE Transactions on Instrumentation and Measurement*, 71, pp. 1-11, 2022, Art no. 9505811
6. Ferlazzo, A., Espro, C., Iannazzo, D., & Neri, G. Determination of phenylalanine by a novel enzymatic PHD/SPE biosensor *IEEE Transactions on Instrumentation and Measurement* (**2023** Accepted).
7. Ferlazzo, A., Espro, C., Iannazzo, D., Bonavita, A., & Neri, G. (**2023**). Ytria-zirconia electrochemical sensor for the detection of tyrosine. *Materials Today Communications*, 106036.
8. Ferlazzo, A., Espro, C., Iannazzo, D., & Neri, G. (**2022**, June). Development of a novel potentiometric PHD/SPE biosensor for the determination of phenylalanine. In *2022 IEEE International Symposium on Medical Measurements and Applications (MeMeA)* (pp. 1-5). IEEE.

Comunicazioni a congressi, workshop e seminari

1. *Salvatore Petralia, Ludovica Maugeri, Maria Anna Messina, Martino Ruggieri, Bruno Andò, Guido Spoto, Riccardo Puccio, Roberto Verardo* PKU-SMART-Sensor: an integrated Point-of-Care system

for the self-testing of phenylalanine in biological specimen: *Point of-Care, Biosensors and Rapid Diagnostics Europe 2023* Giugno 2023 (Rotterdam Olanda).

2. Maria Anna Messina, S. Petralia, S. Conoci, F. Raudino, C. Meli, A. Fiumara, Sviluppo di un sistema Point-of-Care per il monitoraggio home-testing di fenilalanina in pazienti fenilchetonurici. X Congresso Nazionale SIMMESN 22/25 Ottobre 2019 Torino.
3. B. Ando, S. Baglio, S. Castorina, S. Graziani, M. Messina, S. Petralia, S. Tondepu, Sri. (2021). A Capacitive Readout Strategy for Ammonia Detection: Design Flow, Modeling and Simulation. 1-6. Proceedings of SAS 2021, 2021, 10.1109/SAS51076.2021.9530059.
4. B. Ando, S. Baglio, S. Castorina, A. Ferlazzo, S. Graziani, Marthala G. B. R., L. Maugeri, M. Messina, G. Neri, S. Petralia, S. Tondepu, Sri. Investigation on a Inkjet printed sensor for ammonia detection in liquid media, *Metroind* 2022, pp. 256-260, doi: 10.1109/MetroInd4.0IoT54413.2022.9831695, 2022
5. B. Ando, S. Baglio, S. Castorina, S. Graziani, S. Petralia, , M. Messina, L. Maugeri, E. Sardini, M. Serpelloni, P. Bellitti, G. Neri, A. Ferlazzo, Investigation on Readout Strategy for Aqueous NH₃ Sensor Developed by Additive Technology, *Metroind* 2023.
6. B. Andò, S. Castorina, L. Maugeri, S. Petralia, M. A. Messina, M. Ruggieri, G. Neri, A. Ferlazzo, E. Sardini, M. Serpelloni, A PAL Capacitive Sensor for Phenylalanine Detection, submitted to XXXIV Eurosensors Conference, 2023
7. B. Andò. S. Petrali, L. Maugeri In.Sicily (innovation-Sicily) Borsa della Ricerca In Sicily 2023", Palermo 13-14 Aprile 2023.
8. Angelo Ferlazzo, Claudia Espro, Daniela Iannazzo, Giovanni Neri. "The 17th edition of IEEE International Symposium on Medical Measurements and Applications (MEMEA 2022)". OC: Development of a novel potentiometric PHD/SPE biosensor for the determination of phenylalanine, 22-24/06/22, Giardini Naxos.
9. Angelo Ferlazzo, Daniela Iannazzo, Claudia Espro and Giovanni Neri. "XII congresso nazionale AICIng 2021", Poster: Un approccio elettrochimico alla determinazione della fenilalanina in pazienti affetti da fenilchetonuria" 5-8 Settembre 2021 (Reggio Calabria)