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## LIST OF ABBREVIATIONS

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| AE                                      | Auxiliary electrode                     |
| AuNPs                                   | Gold nanoparticles                      |
| CV                                      | Cyclic voltammetry                      |
| DPV                                     | Differential pulse voltammetry          |
| ECL                                     | Electrochemiluminescence                |
| EIS                                     | Electrochemical impedance spectroscopy  |
| ELISA                                   | Enzyme-linked immunosorbent assay       |
| [Fe(CN) <sub>6</sub> ] <sup>3-/4-</sup> | Ferri/ferrocyanide                      |
| FIA                                     | Flow injection analysis                 |
| GCE                                     | Glassy carbon electrodes                |
| GE                                      | Gold electrode                          |
| GO                                      | Graphene oxide                          |
| HIgG                                    | Human Immunoglobulin G                  |
| I.D.                                    | Inner diameter                          |
| Ig                                      | Immunoglobulin                          |
| LAPS                                    | Light-addressable potentiometric sensor |
| LOD                                     | Limit of detection                      |
| O.D.                                    | Outer diameter                          |
| PBS                                     | Phosphate buffer saline                 |
| QCM                                     | Quartz crystal microbalance             |
| RE                                      | Reference electrode                     |
| RLS                                     | Resonance light scattering              |
| RSD                                     | Relative standard deviation             |
| SD                                      | Standard deviation                      |
| SEM                                     | Scanning electron microscopy            |
| SIA                                     | Sequential injection analysis           |
| SPCE                                    | Screen-printed carbon electrode         |
| SPR                                     | Surface plasmon resonance               |

|           |                                                                 |
|-----------|-----------------------------------------------------------------|
| SS-RTP-IA | Solid substrate room temperature phosphorescence<br>immunoassay |
| SWV       | Square wave voltammetry                                         |
| WE        | Working electrode                                               |



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## LIST OF SYMBOLS

|     |                                |
|-----|--------------------------------|
| °C  | Degree Celsius                 |
| g   | Gram                           |
| kV  | kilovolt                       |
| M   | Molar ( $\text{mol dm}^{-3}$ ) |
| min | Minute                         |
| mg  | Milligram                      |
| mL  | Milliliter                     |
| mm  | Millimeter                     |
| mM  | Millimolar                     |
| mV  | Millivolt                      |
| ng  | Nanogram                       |
| w/v | weigh by volume                |

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