# Supplementary File

**Table S1:** Summary of the dispersion media used during nanoparticle TEM and DLS assessment in the literature reviewed.

|  |  |  |  |
| --- | --- | --- | --- |
| **Study** | **Nanoparticle Material** | **Measurement** | **Dispersion Medium** |
| Huang *et al.* [118] (characterized in[117]) | Alumina | Core Size  Morphology  Zeta Potential  Hydrodynamic Size  Size Distribution | Ethanol  Water  Culture Medium  Culture Medium  Culture Medium |
| Chen *et al .* [143] | Alumina | Hydrodynamic Size  Size Distribution | Distilled Water |
| Sharma *et al.* [167] | Aluminum  Copper  Silver | *Characterization not conducted/described\** | *N/A* |
| Sharma *et al.* [173] | Aluminum  Copper  Silver | *Characterization not conducted/described\** | *N/A* |
| Kaushik *et al.* [88] | Barium Titanate | Core Size  Dispersal  Morphology  Zeta Potential  Hydrodynamic Size  Polydispersity Index | *Unspecified\**  *Unspecified\**  *Unspecified\**  *Unspecified\**  *Unspecified\**  PBS |
| Hardas *et al.* [102] | Ceria | Core Size  Morphology  Zeta Potential  Hydrodynamic Size  Size Distribution | Water pH 7.7-8.0 |
| Portioli *et al.* [90] | Ceria | Core Size  Morphology  Agglomeration | PBS |
| Heckman *et al.* [89] | Ceria | Core Size  Dispersal  Zeta Potential  Hydrodynamic Size | Milli-Q water  Milli-Q water  Milli-Q water  Milli-Q water / Simulated Body Fluid at pH 7.25 (140 mM NaCl, 5 mM KCl, 4 mM NaHCO3, 2.5 mM CaCl2, 1.5 mM MgSO4, 10 mM Na-Hepes) |
| Kim *et al.* [67] | Cobalt-Iron Oxide-Silica | *Characterization not conducted/described\** | *N/A* |
| Sharma *et al.* [146] | Copper  Silver  Titanium Dioxide | *Characterization not conducted/described\** | *N/A* |
| Sharma *et al.* [183] | Copper  Silver  Silica | *Characterization not conducted/described\** | *N/A* |
| Sharma *et al.* [184] | Copper  Silver | *Characterization not conducted/described\** | *N/A* |
| Sharma *et al.* [172] | Copper  Silver | *Characterization not conducted/described\** | *N/A* |
| Prades *et al.* [1] | Gold | Core Size  Dispersal  Zeta potential  Hydrodynamic Size  Size Distribution  Polydispersity Index | 1.2 mM Sodium citrate at pH 7.4 at 25 °C |
| Frigell *et al.* [8] | Gold | Core Size | Milli-Q water |
| Gromnicova *et al.* [12] | Gold | Core Size  Hydrodynamic Size | Water |
| Garrido *et al.* [103] | Gold | Core Size | 20 mM sodium phosphate buffer at pH 9.5. |
| Hari and Kumpati [104] | Gold | Core Size  Dispersal  Morphology  Zeta Potential  Hydrodynamic Size  Polydispersity Index | Milli-Q water |
| Dixit *et al*. [107] | Gold | Core Size  Dispersal  Agglomeration  Hydrodynamic Size  Size Distribution Profile  Polydispersity Index | *Unspecified aqueous solvent / unspecified organic solvent\**  *Unspecified aqueous solvent / unspecified organic solvent\**  *Unspecified aqueous solvent / unspecified organic solvent\**  *Unspecified aqueous solvent\**  *Unspecified aqueous solvent\**  *Unspecified aqueous solvent\** |
| Li *et al.* [108] | Gold | Core Size  Dispersal  Morphology  Agglomeration  Zeta Potential  Size Distribution Profile  Hydrodynamic Size | *Unspecified\**  *Unspecified\**  *Unspecified\**  *Unspecified\**  PBS at pH 7.4 / cell culture medium at 25 °C  PBS at pH 7.4 / cell culture medium  PBS at pH 7.4 / cell culture medium |
| Peng *et al.* [109] | Gold | Core Size  Zeta Potential  Hydrodynamic Size | PBS at pH 7.4 |
| Yin *et al*. [128] | Gold | Morphology  Zeta Potential  Size Distribution Profile | *Unspecified\**  PBS at pH 7.4  PBS at pH 7.4 |
| Ruan *et al.* [129] | Gold | Morphology  Zeta Potential  Hydrodynamic Size  Size Distribution Profile  Polydispersity Index | PBS at pH 8.0 |
| Guerrero *et al.* [115] | Gold | Core Size  Dispersal  Morphology  Agglomeration  Zeta Potential  Hydrodynamic Size  Polydispersity Index | 1.2 mM citrate solution at pH 7.4 |
| Cabezón *et al*. [140] | Gold | Zeta Potential  Hydrodynamic Size  Polydispersity Index | PBS at pH 7.4 |
| Feng *et al.* [124] | Gold | Core Size  Dispersal  Morphology  Size Distribution Profile  Polydispersity Index | *Unspecified\** / 10 mM L-glutathione |
| Jensen *et al*. [142] | Gold | Zeta Potential  Hydrodynamic Size  Polydispersity Index | *Unspecified\** |
| Ruan *et al.* [132] | Gold | Morphology  Agglomeration  Hydrodynamic Size  Size Distribution Profile | N-(2-hydroxyethyl)piperazine-N′-ethanesulfonic acid (HEPES) buffer at pH 5.0 |
| Ali *et al.* [119] | Gold | Core Size  Morphology  Dispersal  Zeta Potential  Hydrodynamic Size | 10% uranyl acetate aqueous solution  10% uranyl acetate aqueous solution  10% uranyl acetate aqueous solution  *Unspecified\**  *Unspecified\** |
| Nair *et al.* [23] | Gold | Core Size  Zeta Potential | *Unspecified\**  *Unspecified liquid over pH range ~2.5 – 10 \** |
| Schäffler *et al.* [78] | Gold | Core Size  Dispersal  Zeta Potential  Hydrodynamic Size  Polydispersity Index | *Unspecified\** |
| Cheng *et al.* [24] | Gold | Core Size  Hydrodynamic Size  Polydispersity Index | *Unspecified\** |
| Lai *et al.* [25] (characterized in [122]) | Gold | Core Size  Dispersal  Morphology  Zeta Potential  Hydrodynamic Size | *Unspecified aqueous solvent\**  *Unspecified aqueous solvent\**  *Unspecified aqueous solvent\**  *Unspecified aqueous solvent\**  Deionized Water |
| Gao *et al.* [32] | Gold | Core Size  Dispersal  Morphology  Agglomeration  Zeta Potential  Hydrodynamic Size | PBS at pH 5.5, 6.5 and 7.4 |
| Velasco-Aguirre *et al.* [26] | Gold | Zeta Potential  Hydrodynamic Size  Polydispersity Index | Milli-Q water / PBS at pH 7.4 |
| Clark and Davis [139] | Gold | Zeta Potential  Hydrodynamic Size | Water |
| Talamini *et al.* [41] | Gold | Core Size  Morphology  Zeta Potential  Hydrodynamic Size | Water  Water  Water at pH 6-7  NaCl at 0.01-2.5 M |
| Yang  *et al.* [185] | Gold | *Characterization not conducted/described\** | *N/A* |
| Kouri *et al.* [138] | Gold | Zeta Potential  Hydrodynamic Size | *Unspecified\** |
| Cabezón *et al.* [178] (characterized in [140]) | Gold | Zeta Potential  Hydrodynamic Size  Polydispersity Index | PBS at pH 7.4 |
| Chen *et al.* [86] | Gold | Core Size  Zeta Potential | *Unspecified\**  PBS at pH 7.4 |
| Sela *et al.* [137] | Gold | Zeta Potential  Hydrodynamic Size | *Unspecified\** |
| Betzer *et al.* [82] | Gold | Core Size  Dispersal  Morphology  Zeta Potential  Hydrodynamic Size | Water  Water  Water  Saline  Water / Saline |
| Li *et al.* [81] | Gold | Core Size  Morphology  Zeta Potential | *Unspecified\** |
| Wiley *et al.* [136] | Gold | Zeta Potential  Hydrodynamic Size | 1.5 mM Potassium Chloride  Water |
| Shilo *et al.*[79] | Gold | Core Size  Dispersal  Morphology | *Unspecified\** |
| Sun *et al*. [68] | Gold-Iron Oxide | Core Size  Morphology | *Unspecified\** |
| Wang *et al.* [125] | Lanthanide-based (NaYF4:Yb,Er core) | Morphology  Agglomeration | Ethanol |
| Dan *et* *al.* [18] | Iron Oxide | Hydrodynamic Size  Zeta Potential | *Unspecified\** |
| Mejías *et al.* [77] | Iron Oxide | Core Size  Dispersal  Zeta potential  Hydrodynamic Size  Polydispersity Index | Water at pH 7.0  Water p at pH 7.0  0.1 M Potassium nitrate over ~ pH 2.0 – 11.0  Water at pH 7.0  Water at pH 7.0 |
| Peiris *et al.* [130] | Iron Oxide | Morphology  Hydrodynamic Size | *Unspecified\** |
| Imam *et al.* [110] | Iron Oxide | Core Size  Dispersal  Morphology  Zeta Potential  Hydrodynamic Size  Polydispersity Index | 2-propanol  2-propanol  2-propanol  Water  Water  Water |
| Wang *et al.* [111] | Iron Oxide | Core Size  Morphology | *Unspecified\** |
| Mao *et al.* [112] | Iron Oxide | Core Size  Morphology | *Unspecified\** |
| Nadeem *et al.* [113] | Iron Oxide | Core Size  Morphology  Agglomeration | Octane |
| Mekawy *et al.* [123] | Iron Oxide | Core Size  Dispersal  Morphology | *Unspecified\** |
| Yang *et al.* [174] | Iron Oxide | *Characterization not conducted/described\** | *N/A* |
| Cheng *et al.* [101] | Iron Oxide | Core Size  Agglomeration  Zeta Potential  Hydrodynamic Size  Size Distribution  Polydispersity Index | Water  Water  Dimethylformamide / Water  Dimethylformamide / Water  Dimethylformamide / Water  Dimethylformamide / Water |
| Wadghiri *et al.* [180] | Iron Oxide | *Characterization not conducted/described\** | *N/A* |
| Zhao *et al.* [100] | Iron Oxide | Core Size  Dispersal  Morphology | *Unspecified\** |
| Mu *et al.* [99] | Iron Oxide | Core Size  Morphology  Zeta Potential  Hydrodynamic Size  Size Distribution  Polydispersity Index | *Unspecified\**  *Unspecified\**  *Unspecified\* solution at pH 7.4*  *Unspecified\* solution at pH 7.4* / Cell Culture Medium (DMEM)  *Unspecified\* solution at pH 7.4*  *Unspecified\* solution at pH 7.4* |
| Ansciaux *et al.* [186] | Iron Oxide | *Characterization not conducted/described\** | *N/A* |
| Vinzant *et al.* [96] | Iron Oxide | Core Size  Dispersal | *Unspecified\** |
| Maritim *et al.* [187] | Iron Oxide | *Characterization not conducted/described\** | *N/A* |
| Marinescu *et al.* [179] | Iron Oxide | *Characterization not conducted/described\** | *N/A* |
| Fiandra *et al.* [188] | Iron Oxide | Core Size  Morphology  Zeta Potential  Hydrodynamic Size | Water at pH 5.5 |
| Kumar *et al.* [141] | Iron Oxide | Zeta Potential | 0.15 M NaCl at pH 8.0 |
| Dhakshinamoorthy *et al.* [94] | Iron Oxide | Core Size  Dispersal  Agglomeration  Zeta Potential | Physiological Saline |
| Qiao *et al.* [92] | Iron Oxide | Core Size  Dispersal  Hydrodynamic Size  Size Distribution  Polydispersity Index | *Unspecified\**  *Unspecified\**  PBS  PBS  PBS |
| Shevtsov *et al.* [91] | Iron Oxide | Core Size  Dispersal  Zeta Potential  Hydrodynamic Size | *Unspecified\** |
| Sillerud *et al.* [85] | Iron Oxide | Core Size  Zeta Potential | PBS at pH 7.4 |
| Huang *et al.* [84] | Iron Oxide | Core Size  Dispersal  Morphology  Zeta Potential  Hydrodynamic Size | Deionized Water |
| Dilnawaz *et al.* [83] | Iron Oxide | Core Size  Dispersal  Zeta Potential  Hydrodynamic Size | Milli-Q Water |
| Le Duc *et al.* [171] | Iron Oxide | *Characterization not conducted/described\** | *N/A* |
| André *et al.* [177] | Iron Oxide | *Characterization not conducted/described\** | *N/A* |
| Fu *et al.* [170] | Iron Oxide | *Characterization not conducted/described\** | *N/A* |
| Rosillo-de la Torre *et al.* [62] | Iron Oxide-Silica | Core Size | *Unspecified\** |
| Yan *et al.* [61] | Iron Oxide-Silica | Core Size  Morphology | Saline |
| Yim *et al*. [14] | Iron Oxide-Manganese | Core Size  Dispersal  Zeta potential  Hydrodynamic Size | *Unspecified\** |
| Hu *et al.* [80] | Manganese Oxide | Core Size  Dispersal  Morphology  Agglomeration  Zeta Potential  Hydrodynamic Size | Water / Chloroform  Water / Chloroform  Water / Chloroform  Water / Chloroform  *Unspecified\**  PBS / Chloroform |
| Barandeh *et al.* [2] | Silica | Core Size  Size Distribution | *Unspecified\** |
| Jampilek *et al.* [105] | Silica | Core Size  Morphology | Methanol |
| You *et al*. [131] | Silica | Morphology  Zeta Potential  Size Distribution | *Unspecified\**  *Unspecified\**  Human Blood Serum |
| Hu *et al*. [114] | Silica | Core Size  Morphology  Zeta Potential  Hydrodynamic Size | *Unspecified\** |
| Zhou *et al.* [126] | Silica | Morphology  Agglomeration  Zeta Potential  Size Distribution | *Unspecified\**  *Unspecified\**  PBS at pH 7.4  *Unspecified\** |
| Baghirov *et al.* [127] | Silica | Morphology  Zeta Potential  Hydrodynamic Size | Ethanol  HEPES at pH 7.2  HEPES at pH 7.2 |
| Zhang *et al*. [71] | Silica | Hydrodynamic Size  Polydispersity Index | Water / PBS / EBM-2 |
| Shi *et al.* [175] | Silica | *Characterization not conducted/described\** | *N/A* |
| Bouchoucha *et al.* [144] | Silica | Core Size  Dispersal  Morphology  Hydrodynamic Size  Polydispersity Index | Water  Water  Water  Water / PBS  Water / PBS |
| Liu *et al.* [42] | Silica | Core Size  Dispersal  Morphology  Zeta Potential  Hydrodynamic Size | *Unspecified\** |
| You *et al.* [98] | Silica | Core Size  Dispersal  Morphology  Zeta Potential | *Unspecified\** |
| Liu *et al*.[97] | Silica | Core Size  Morphology  Zeta Potential | PBS |
| Yang *et al.* [93] | Silica | Core Size  Dispersal  Zeta Potential  Hydrodynamic Size | *Unspecified\**  *Unspecified\**  PBS  *Unspecified\** |
| Yang *et al.* [66] | Silica  Silica-Gold | Core Size  Dispersal  Morphology  Zeta Potential | *Unspecified\** |
| Shevtsov *et al.* [69] | Silica-Iron | *Characterization not conducted/described\** | *N/A* |
| Zhao *et al.* [65] (characterized in [64]) | Silica-Iron Oxide | Core Size  Dispersal  Zeta Potential | *Unspecified\**  *Unspecified\**  PBS at pH 7.4 |
| Ku *et al.* [64] | Silica-Iron Oxide | Core Size  Dispersal  Zeta Potential | *Unspecified\**  *Unspecied\**  PBS at pH 7.4 |
| Shim *et al.* [15] | Silica  Zinc Oxide | *Characterization not conducted/described\** | *N/A* |
| Garza-Ocañas *et al.* [9] | Silver | Core Size  Dispersal  Morphology  Size Distribution | Deionized water with 1200 µmol Sodium Borohydride |
| Kiruba Daniel *et al.* [106] | Silver | Core Size  Dispersal | *Unspecified\** |
| Aliev *et al.* [176] | Silver | *Characterization not conducted/described\** | *N/A* |
| Xu *et al.* [95] | Silver | Core Size  Dispersal  Morphology  Zeta Potential | Deionized Water |
| Hadrup *et al.*[133] | Silver | Agglomeration  Zeta Potential  Hydrodynamic Size | *Unspecified\** |
| Disdier *et al.* [182] (characterized in [120]) | Titanium Dioxide | Core Size  Dispersal  Morphology  Hydrodynamic Size | Physiological salt solution  Physiological salt solution  Physiological salt solution  Water / saline solution |
| Liu *et al.* [87] | Titanium Dioxide | Core Size  Morphology  Zeta Potential  Hydrodynamic Size  Polydispersity Index | *Unspecified\**  *Unspecified\**  Cell culture media with 10% FBS  Cell culture media with 10% FBS  Cell culture media with 10% FBS |
| Li *et al.* [189] (characterized in [145]) | Titanium Dioxide | *Characterization not conducted/described\** | *N/A* |
| Lipiński *et al.* [63] | Yttrium Oxide-Terbium | *Characterization not conducted/described\** | *N/A* |
| Xie *et al.* [181] (characterized in [121]) | Zinc Oxide | Core Size  Morphology | *Unspecified\** |
| Kura *et al.* [116] | Zinc-Aluminum | Core Size  Dispersal  Morphology | *Unspecified\** |

\* To the best of the authors’ knowledge.

**Table S2: T**ransmission electron microscopy and dynamic light scattering analytical parameters examined in the reviewed literature.

| **Study** | **Nanoparticle Material** | **Transmission Electron Microscopy** | | | | **Dynamic Light Scattering** | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Core Size** | **Dispersal** | **Morphology** | **Agglomeration** | **Zeta Potential** | **Hydrodynamic Size** | **Size Distribution** | **Polydispersity Index** |
| Huang *et al.* [118] (characterized in[117]) | Alumina | x |  | x |  | x | x | x |  |
| Chen *et al.* [143] | Alumina |  |  |  |  |  | x | x |  |
| Sharma *et al.* [167] | Aluminum  Copper  Silver |  |  |  |  |  |  |  |  |
| Sharma *et al.* [173] | Aluminum  Copper  Silver |  |  |  |  |  |  |  |  |
| Kaushik *et al.* [88] | Barium Titanate | x |  | x |  | x | x |  | x |
| Hardas *et al.* [102] | Ceria | x |  | x |  | x | x | x |  |
| Portioli *et al.* [90] | Ceria | x |  | x | x |  |  |  |  |
| Heckman *et al.* [89] | Ceria | x | x |  |  | x | x |  |  |
| Kim *et al.* [67] | Cobalt-Iron Oxide-Silica |  |  |  |  |  |  |  |  |
| Sharma *et al.* [146] | Copper  Silver  Titanium Dioxide |  |  |  |  |  |  |  |  |
| Sharma *et al.* [183] | Copper  Silver  Silica |  |  |  |  |  |  |  |  |
| Sharma *et al.* [184] | Copper  Silver |  |  |  |  |  |  |  |  |
| Sharma *et al.* [172] | Copper  Silver |  |  |  |  |  |  |  |  |
| Prades *et al.* [1] | Gold | x | x |  |  | x | x | x | x |
| Frigell *et al.* [8] | Gold | x |  |  |  |  |  |  |  |
| Gromnicova *et al.* [12] | Gold | x |  |  |  |  | x |  |  |
| Garrido *et al.* [103] | Gold | x |  |  |  |  |  |  |  |
| Hari and Kumpati [104] | Gold | x | x | x |  | x | x |  | x |
| Dixit *et al*. [107] | Gold | x | x |  | x |  | x | x | x |
| Li *et al.* [108] | Gold | x | x | x | x | x | x | x |  |
| Peng *et al.* [109] | Gold | x |  |  |  | x | x |  |  |
| Yin *et al*. [128] | Gold |  |  | x |  | x |  | x |  |
| Ruan *et al.* [129] | Gold |  |  | x |  | x | x | x | x |
| Guerrero *et al.* [115] | Gold | x | x | x | x | x | x |  | x |
| Cabezón *et al*. [140] | Gold |  |  |  |  | x | x |  | x |
| Feng *et al.* [124] | Gold | x | x | x |  |  |  | x | x |
| Jensen *et al*. [142] | Gold |  |  |  |  | x | x |  | x |
| Ruan *et al.* [132] | Gold |  |  | x | x |  | x | x |  |
| Ali *et al.* [119] | Gold | x | x | x |  | x | x |  |  |
| Nair *et al.* [23] | Gold | x |  |  |  | x |  |  |  |
| Schäffler *et al.* [78] | Gold | x | x |  |  | x | x |  | x |
| Cheng *et al.* [23] | Gold | x |  |  |  |  | x |  | x |
| Lai *et al.* [25] (characterized in [122]) | Gold | x | x | x |  | x | x |  |  |
| Gao *et al.* [32] | Gold | x | x | x | x | x | x |  |  |
| Velasco-Aguirre *et al.* [26] | Gold |  |  |  |  | x | x |  | x |
| Clark and Davis [139] | Gold |  |  |  |  | x | x |  |  |
| Talamini *et al.* [41] | Gold | x |  | x |  | x | x |  |  |
| Yang  *et al.* [185] | Gold |  |  |  |  |  |  |  |  |
| Kouri *et al.* [138] | Gold |  |  |  |  | x | x |  |  |
| Cabezón *et al.* [178] (characterized in [140]) | Gold |  |  |  |  | x | x |  | x |
| Chen *et al.* [86] | Gold | x |  |  |  | x |  |  |  |
| Sela *et al.* [137] | Gold |  |  |  |  | x | x |  |  |
| Betzer *et al.* [82] | Gold | x | x | x |  | x | x |  |  |
| Li *et al.* [81] | Gold | x |  | x |  | x |  |  |  |
| Wiley *et al.* [136] | Gold |  |  |  |  | x | x |  |  |
| Shilo *et al.*[79] | Gold | x | x | x |  |  |  |  |  |
| Sun *et al*. [68] | Gold-Iron Oxide | x |  | x |  |  |  |  |  |
| Wang *et al.* [125] | Lanthanide-based (NaYF4:Yb,Er core) |  |  | x | x |  |  |  |  |
| Dan *et* *al.* [18] | Iron Oxide |  |  |  |  | x | x |  |  |
| Mejías et al. [77] | Iron Oxide | x | x |  |  | x | x |  | x |
| Peiris *et al.* [130] | Iron Oxide |  |  | x |  |  | x |  |  |
| Imam *et al.* [110] | Iron Oxide | x |  | x |  | x | x | x |  |
| Wang *et al.* [111] | Iron Oxide | x |  | x |  |  |  |  |  |
| Mao *et al.* [112] | Iron Oxide | x |  | x |  |  |  |  |  |
| Nadeem *et al.* [113] | Iron Oxide | x |  | x | x |  |  |  |  |
| Mekawy *et al.* [123] | Iron Oxide | x | x | x |  |  |  |  |  |
| Yang *et al.* [174] | Iron Oxide |  |  |  |  |  |  |  |  |
| Cheng *et al.* [101] | Iron Oxide | x |  |  | x | x | x | x | x |
| Wadghiri *et al.* [180] | Iron Oxide |  |  |  |  |  |  |  |  |
| Zhao *et al.* [100] | Iron Oxide | x | x | x |  |  |  |  |  |
| Mu *et al.* [99] | Iron Oxide | x |  | x |  | x | x | x | x |
| Ansciaux *et al.* [186] | Iron Oxide |  |  |  |  |  |  |  |  |
| Vinzant *et al.* [96] | Iron Oxide | x | x |  |  |  |  |  |  |
| Maritim *et al.* [187] | Iron Oxide |  |  |  |  |  |  |  |  |
| Marinescu *et al.* [179] | Iron Oxide |  |  |  |  |  |  |  |  |
| Fiandra *et al.* [188] | Iron Oxide | x |  | x |  | x | x |  |  |
| Kumar *et al.* [141] | Iron Oxide |  |  |  |  | x |  |  |  |
| Dhakshinamoorthy *et al.* [94] | Iron Oxide | x | x |  | x | x |  |  |  |
| Qiao *et al.* [92] | Iron Oxide | x | x |  |  |  | x | x | x |
| Shevtsov *et al.* [91] | Iron Oxide | x | x |  |  | x | x |  |  |
| Sillerud *et al.* [85] | Iron Oxide | x |  |  |  | x |  |  |  |
| Huang *et al.* [84] | Iron Oxide | x | x | x |  | x | x |  |  |
| Dilnawaz *et al.* [83] | Iron Oxide | x | x |  |  | x | x |  |  |
| Le Duc *et al.* [171] | Iron Oxide |  |  |  |  |  |  |  |  |
| André *et al.* [177] | Iron Oxide |  |  |  |  |  |  |  |  |
| Fu *et al.* [170] | Iron Oxide |  |  |  |  |  |  |  |  |
| Rosillo-de la Torre *et al.* [62] | Iron Oxide-Silica | x |  |  |  |  |  |  |  |
| Yan *et al.* [61] | Iron Oxide-Silica | x |  | x |  |  |  |  |  |
| Yim *et al*. [14] | Iron Oxide-Manganese | x | x |  |  | x | x |  |  |
| Hu *et al.* [80] | Manganese Oxide | x | x | x | x | x | x |  |  |
| Barandeh *et al.* [2] | Silica | x |  |  |  |  |  | x |  |
| Jampilek *et al.* [105] | Silica | x |  | x |  |  |  |  |  |
| You *et al*. [131] | Silica |  |  | x |  | x |  | x |  |
| Hu *et al*. [114] | Silica | x |  | x |  | x | x |  |  |
| Zhou *et al.* [126] | Silica |  |  | x | x | x |  | x |  |
| Baghirov *et al.* [127] | Silica |  |  | x |  | x | x |  |  |
| Zhang *et al*. [71] | Silica |  |  |  |  |  | x |  | x |
| Shi *et al.* [175] | Silica |  |  |  |  |  |  |  |  |
| Bouchoucha *et al.* [144] | Silica | x | x | x |  |  | x |  | x |
| Liu *et al.* [42] | Silica | x | x | x |  | x | x |  |  |
| You *et al.* [98] | Silica | x | x | x |  | x |  |  |  |
| Liu *et al*.[97] | Silica | x |  | x |  | x |  |  |  |
| Yang *et al.* [93] | Silica | x | x |  |  | x | x |  |  |
| Yang *et al.* [66] | Silica  Silica-Gold | x | x | x |  | x |  |  |  |
| Shevtsov *et al.* [69] | Silica-Iron |  |  |  |  |  |  |  |  |
| Zhao *et al.* [65] (characterized in [64]) | Silica-Iron Oxide | x | x |  |  | x |  |  |  |
| Ku *et al.* [64] | Silica-Iron Oxide | x | x |  |  | x |  |  |  |
| Shim *et al.* [15] | Silica  Zinc Oxide |  |  |  |  |  |  |  |  |
| Garza-Ocañas *et al.* [9] | Silver | x | x | x |  |  |  | x |  |
| Kiruba Daniel *et al.* [106] | Silver | x | x |  |  |  |  |  |  |
| Aliev *et al.* [176] | Silver |  |  |  |  |  |  |  |  |
| Xu *et al.* [95] | Silver | x | x | x |  | x |  |  |  |
| Hadrup *et al.*[133] | Silver |  |  |  | x | x | x |  |  |
| Disdier *et al.* [182] (characterized in [120]) | Titanium Dioxide | x | x | x |  |  | x |  |  |
| Liu *et al.* [87] | Titanium Dioxide | x |  | x |  | x | x |  | x |
| Li *et al.* [189] (characterized in [145]) | Titanium Dioxide |  |  |  |  |  |  |  |  |
| Lipiński *et al.* [63] | Yttrium Oxide-Terbium |  |  |  |  |  |  |  |  |
| Xie *et al.* [181] (characterized in [121]) | Zinc Oxide | x |  | x |  |  |  |  |  |
| Kura *et al.* [116] | Zinc-Aluminum | x | x | x |  |  |  |  |  |