Supporting Information

Reactive conductive ink capable of in-situ and rapid synthesis of conductive patterns suitable for inkjet printing

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| Printing process | Ink composition | Printing layers (n) | Post treatment temperature | Sheet resistance | conductivity | Ref. |
|------------------|-----------------|---------------------|-----------------------------|-----------------|-------------|------|
| ink-jet printing | Reductant: ascorbic acid | - | 150 °C | 0.5 Ω/□ | 1.89 × 10^5 S.m⁻¹ | 30 |
| inkjet printing | Reductant: NaBH₄ | 350/250 | - | - | 1.8 × 10⁶ S.m⁻¹ (7.5um) / 2.2 × 10⁶ S.m⁻¹ (7.5um) | 31 |
| Electrohydrodynamic printing | Formic acid | 100 | 90 °C | - | 3.3 × 10⁸ S.m⁻¹ | 32 |
| microreactor-assisted printing | Reductant: Formaldehyde | - | RT | - | 3.3 × 10⁷ S.m⁻¹ 134 ±9 nm | 33 |
| inkjet printing | Silver Source : AgNO₃ | - | 100 °C | - | 0.58±0.04×10⁵ S.m⁻¹ (323.8 nm) | 34 |
| inkjet printing | Amelex MC NANO INK AX JP-60 n silver nanoink | 8 | 130 °C | 0.62±0.03 Ω/□ | - | 35 |
| inkjet printing | Commercially available inkjet-printable silver U5714 | 2 | 150 °C | 5.7 Ω/□ | - | 36 |
| inkjet printing | Silver Source : Ag(NH₃)₂CH₃CO₂ | 4 | 50 °C | 2.3 Ω/□ | - | 37 |
| inkjet printing | organometallic reactive compounds | 8 | 140 °C | 0.2 ± 0.025 Ω/□ | - | 38 |
| inkjet printing | Silver Source : AgNO₃ | 7/4 | RT/130 °C | 5.15 /1.4 Ω/□ | - | This work |