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## BARE EYE DETECTION BASED ON GOLD NANOPARTICLES AS AN ALTERNATIVE FOR TRADITIONAL ANALYTICAL METHODS

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Since the traditional analytical techniques are costly and need trained staff, research is focused on the development of easy analytical methods in order to overcome the increase in needs especially in food security. For this purpose, there are several reports aiming to improve these methods or explore novel strategies for its product detection. Gold nanoparticles (AuNPs) can be functionalized with biology compounds (streptavidin, avidin-AuNPs for instance), and designed to signal for a selective contaminant detection. Most of these complexes can cause clusterization of biology compound-AuNPs and leads to a color change of the solution from red to blue (Figure 1). This visual detection scheme which does not require any fluorescent reagents and detection instruments can hold promise in point of care and food testing, particularly in resource-limited regions

### Biography

Essy Kouadio Fodjo has received his PhD degree (2013) in Analytical Chemistry under the supervision of Prof Yitao Long from East China University of Science and Technology (Shanghai, China). After completion of PhD, he has been awarded as Visiting Scientist in Analytical Chemistry based on Nanotechnology at Abdullah Gull University by TUBITAK (Turkey). He acts as Project Leader supported by Third World Academy of Sciences (TWAS) for the project entitled Selective-Size synthesis of Silver Nanomaterials AgAu<sub>x</sub> (Fe<sub>3</sub>O<sub>4</sub>), under the Research Grant N° 16-510 RG/CHE/AF/AC\_G-FR3240293301. His research is mainly focused on Analytical Chemistry based on Nanotechnology, whose background is built after years of experience in research, evaluation and teaching both in study tours and education institution (Felix Houphouet-Boigny University). He has published more than 20 papers in reputed journals such as *Journal of Materials Chemistry, Materials Chemistry and Physics and Applied Surface Science*.

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