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Interference Effects in Surface-Plasmon Interaction due to the presence of External Charged Particles in Nanostructures[1] JUANA GERVASONI, CNEA-CONICET — In this work we study the interferences and resonances arising in plasmon surface excitation due to the interaction of external charged particles with nanosystems of different shapes and materials. The obtained dispersion relations are very sensitive to the chosen dielectric functions, and so are the quantities derived from them. We show the similarities and differences among them, as well as with planar surfaces. We demonstrate that these effects interference effects must be taken into account for the design of electronic devices of nano dimensions.

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