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hidden charm mesons in nuclear matter and nuclei

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Recent results for the η_c - and J/ψ -nucleus bound state energies for various nuclei are presented. Essential input for the calculation, namely the medium-modified D and D^* meson masses, as well as the density distributions in nuclei, are calculated within the quark-meson coupling model. The attractive potentials for the η_c and J/ψ mesons in the nuclear medium originate, respectively, from the in-medium enhanced DD^* and $D\bar{D}$ loops in the η_c and J/ψ self energies. Our results suggest that the η_c and J/ψ mesons should form bound states with all the nuclei considered. Some of the results presented were recently published in J.J. Cobos-Martinez et al, Phys. Lett. B 811 (2020) 135882

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