Supplementary Figure 1. Band structure of solid picene calculated in LDA (left panel) and in GW (right panel). In the latter case, solid lines are a guide for the eye, since GW corrections have been explicitly evaluated only at \( \mathbf{k} \) points corresponding to the dots. The zero of the energy axis has been set to the corresponding top valence energy.

Supplementary Figure 2. Comparison between LDA and GW densities of valence states.
Supplementary Figure 3. (Left panel) Unit cell of solid picene (light blue: C atoms; red: H atoms). (Right panel) Real (red line) and imaginary (black line) part of the dielectric function of Picene evaluated along the three Cartesian directions.

Supplementary Figure 4. Loss function of Picene with (black line) and without (red line) local fields evaluated along the three Cartesian directions.
Supplementary Figure 5. Loss function of solid Picene at a small momentum transfer of 0.1 Å⁻¹. The experimental data represent excitations with predominant \( a, b \) polarization (labelled \( ab \), red curves) and with a strong contribution of excitations polarized along the \( c \)-axis (labelled \( c \), black curve). Note that the anisotropy which is seen in the calculations (Fig 3 above) for the \( \pi + \sigma \) plasmon is hardly visible in the experimental data, which we attribute to the mixture of crystallite directions present in our samples.

Supplementary Figure 6. Electron diffraction profiles of solid Picene for the two different orientated films. The values in parentheses give the corresponding Miller indices and their positions are in fair agreement with the structural data described in. [A. De et al., Acta Crystallogr. C 41, 907 (1985)]