WHAT IS CLAIMED IS:

1. A method for fabricating an integrated micro LED display comprising:

for each of two or more micro LED die comprising an array of micro LEDs fabricated on a first substrate, attaching the micro LED array to a CMOS die, the CMOS die comprising an array of corresponding pixel drivers fabricated on a CMOS substrate, wherein attaching the micro LED array to the CMOS die comprises:

transferring the micro LED array to a second substrate by use of an adhesive, including separating the first substrate from the micro LED array, the micro LED array supported by the second substrate, wherein each micro LED has a bonding metal pad and each of the pixel drivers that corresponds to one of the micro LEDs also has a bonding metal pad;

aligning and bonding the bonding metal pads for the micro LED array supported by the second substrate to the corresponding bonding metal pads for the array of pixel drivers, wherein, during the aligning and bonding process, the micro LED array has a protrusion height above the second substrate that is sufficient to provide clearance for other micro LED arrays that were previously bonded to the CMOS die; and

removing the second substrate by releasing the adhesive before aligning and bonding a next micro LED array.

2. The method of claim 1 wherein the bonding occurs at an elevated temperature, the first substrate and CMOS substrate are incompatible for bonding at the elevated

temperature due to different thermal coefficients of expansion but the second substrate and CMOS substrate have thermal coefficients of expansion that are compatible for bonding at the elevated temperature.

3. The method of claim 1 wherein the first substrate is one of sapphire, silicon, GaAs and SiC substrates; and the second substrate is one of sapphire, silicon, glass, ceramic and polymer substrates.

4. The method of claim 1 wherein the adhesive is one of SU-8, benzocyclobutene (BCB), polyimide, polybenzoxazole (PBO), silicone or a thermal release coating.

5. The method of claim 1 wherein transferring the micro LED array to the second substrate by use of the adhesive comprises thermal treatment or UV irradiation to cure the adhesive.

6. The method of claim 1 wherein removing the second substrate by releasing the adhesive comprises at least one of laser irradiation, wet etching the adhesive, dry etching the adhesive, a thermal process, and mechanical exfoliation to release the adhesive.

7. The method of claim 1 wherein removing the second substrate by releasing the adhesive comprises mechanical exfoliation to release the adhesive, wherein an adhesion control layer is inserted between the micro LEDs and the adhesive to facilitate mechanical exfoliation of the micro LEDs from the adhesive.

8. The method of claim 1 further comprising:

removing excess adhesive after the second substrate has been removed by releasing the adhesive.

9. The method of claim 8 wherein removing excess adhesive comprises wet etching or dry etching to remove excess adhesive.

10. The method of claim 1 wherein the adhesive comprises two adhesive layers, and removing the second substrate by releasing the adhesive comprises releasing the one of the two adhesive layers that is closer to the second substrate.

11. The method of claim 1 wherein transferring the micro LED array to the second substrate by use of the adhesive comprises:

attaching the micro LED array supported by the first substrate to the second substrate by use of the adhesive; and

separating the first substrate from the micro LED array, while the micro LED array is attached to the second substrate.

12. The method of claim 1 wherein transferring the micro LED array to the second substrate by use of the adhesive comprises:

attaching the micro LED array supported by the first substrate to an intermediate substrate;

separating the first substrate from the micro LED array, while the micro LED array is attached to the intermediate substrate;

attaching the micro LED array supported by the intermediate substrate to the second substrate by use of the adhesive; and

separating the intermediate substrate from the micro LED array, while the micro LED array is attached to the second substrate.

13. The method of claim 1 further comprising:

while the micro LED array is supported by the second substrate, removing adhesive in areas outside the micro LED array to increase the protrusion height of the micro LED array above the second substrate to provide

clearance for the other micro LED arrays that were previously bonded to the CMOS die.

14. The method of claim 1 wherein transferring the micro LED array to the second substrate by use of the adhesive comprises a use of additional layer(s) between the micro LED array and the second substrate to increase the protrusion height of the micro LED array above the second substrate to provide clearance for the other micro LED arrays that were previously bonded to the CMOS die.

15. The method of claim 1 wherein the micro LED die contains multiple micro LED arrays, and each micro LED array is separately attached to a different CMOS die.

16. The method of claim 1 wherein the method is performed on a wafer scale before individual dies are singulated from the wafer.

17. The method of claim 1 wherein bonding the micro LED array to the array of pixel drivers comprises eutectic bonding or electrically conductive bonding.

18. The method of claim 1 wherein the micro LED die includes contacts to the array of micro LEDs, and transferring the micro LED array to the second substrate by use of the adhesive comprises transferring the micro LED array with contacts to the second substrate by use of the adhesive.