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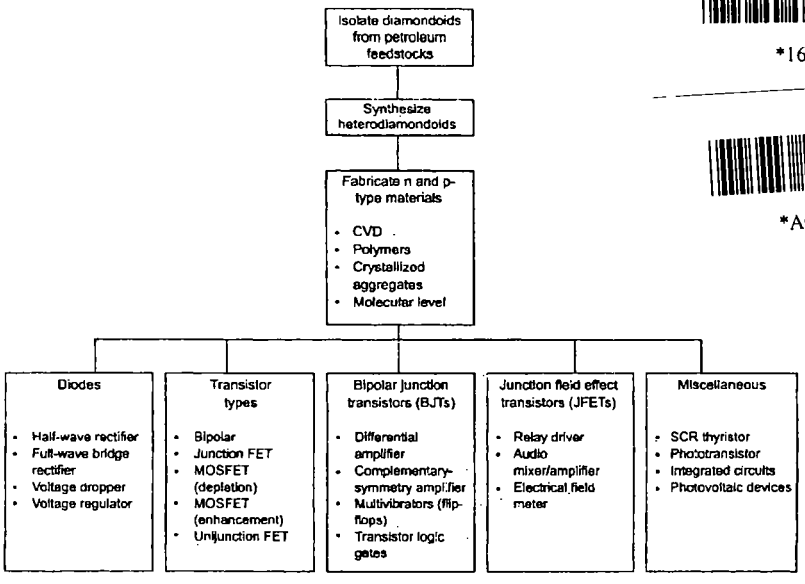
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(54) Title: HETEROATOM-CONTAINING DIAMONDOID TRANSISTORS







(57) Abstract: Novel heterodiamondoids are disclosed. These heterodiamondoids are diamondoids that include heteroatoms in the diamond lattice structure. The heteroatoms may be either electron donating, such that an n-type heterodiamondoid is created, or electron withdrawing, such that a p-type heterodiamondoid is made. Bulk materials may be fabricated from these heterodiamondoids, and the techniques involved include chemical vapor deposition, polymerization, and crystal aggregation. Junctions may be made from the p-type and n-type heterodiamondoid based materials, and microelectronic devices may be made that utilize these junctions. The devices include diodes, bipolar junction transistors, and field effect transistors.

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— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

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