

numbers/wafer was graded as "poor."

[0052] [polymer synthesis example 1]

(synthesis of poly-4-methyltriphenyleneamine (Polymer P1))

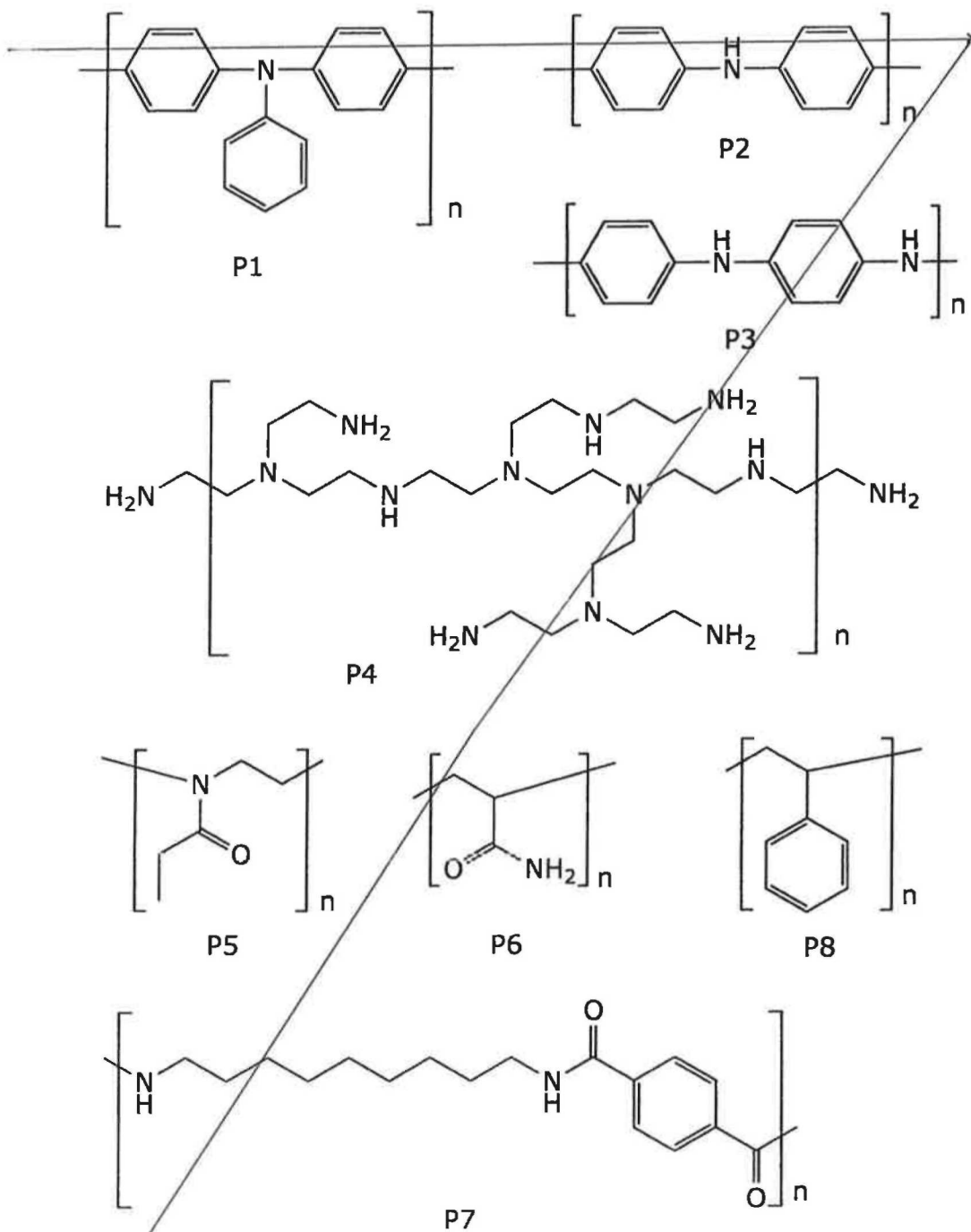
5 Iron(III) chloride (anhydrous) (519 parts) and
chloroform (4330 parts) were mixed under a nitrogen
atmosphere in a reaction vessel equipped with a stirrer,
a condenser, a heater, a nitrogen-introduction tube and a
thermostat, and the reaction temperature was kept at
10 50°C. Subsequently, 4-methyltriphenylamine (212
parts) dissolved in chloroform (440 parts) was added
and stirred. The reaction temperature was kept at 50°C
for 0.5 hour to proceed the reaction (oxidative coupling
polymerization).

15 [0053] After the reaction was completed, the reaction
solution was poured into acetone (54000 parts) and then
precipitate was collected by filtration. The precipitate
was dissolved in chloroform (4000 parts), and insoluble
residue was removed by filtration. To the filtrate, 1
20 wt% aqueous ammonia solution (4000 parts) was added
and the chloroform solution was extracted. Subsequently,
the chloroform solution was condensed and poured into
acetone (54000 parts) and then precipitate was collected
by filtration. The collected precipitate was dried in
25 vacuum at 90°C, to obtain Polymer P1 in an amount of
85 parts (yield: 40%). The molecular weight thereof
was then measured by GPC to obtain the following
results: number average molecular weight $M_n = 2170$
Da,
30 weight average molecular weight $M_w = 3991$ Da, and
molecular-weight distribution $M_w/M_n = 1.84$.

[0054] [polymer synthesis example 2]

(synthesis of poly-methyldiphenyleneamine (Polymer P2))

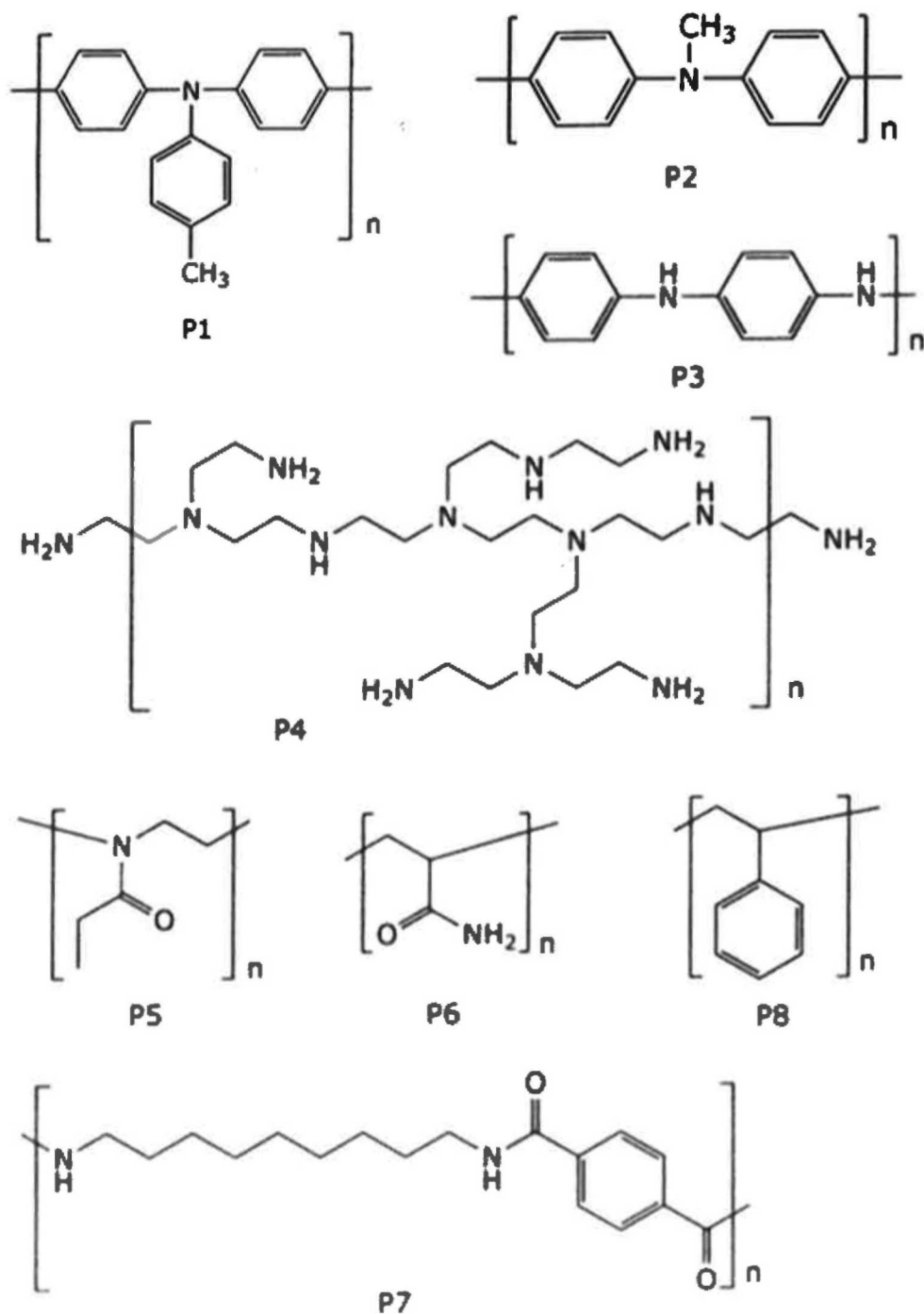
35 The procedure of synthesis example 1 was
repeated except for changing the monomer from



[0060] [Example 1]

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Cyclohexanone (275 parts) was added to Polymer P1 (10 parts), and the mixture was stirred for 30 minutes at room temperature to prepare a 3.5 wt% polymer composition. Independently, a glass column was charged with an ion-exchange resin (EG-290-HG



[0060] [Example 1]

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