

B.P. are more reliable than M.P. for measuring intermolecular forces - SEE GRAPH

	ALKANES	ALKENES	ALCOHOLS	ALDEHYDES	KETONES	CARB. ACIDS	ETHERS
1	methane <chem>CH4</chem> m.p. <u>-183</u> b.p. <u>-162</u>		methyl alcohol <chem>-CH2OH</chem> m.p. <u>-97</u> b.p. <u>65</u>	formaldehyde <chem>HCHO</chem> m.p. <u>-92</u> b.p. <u>-20</u>		formic acid <chem>HCOOH</chem> m.p. <u>-8</u> b.p. <u>107</u>	
2	ethane <chem>C2H6</chem> m.p. <u>-183</u> b.p. <u>-89</u>	ethene <chem>C2H4</chem> m.p. <u>-169</u> b.p. <u>-104</u>	ethyl alcohol <chem>C2H5OH</chem> m.p. <u>-115</u> b.p. <u>78.5</u>	acetylaldehyde <chem>CH3CHO</chem> m.p. <u>-121</u> b.p. <u>20</u>		acetic acid <chem>CH3COOH</chem> m.p. <u>-17</u> b.p. <u>118</u>	dimethyl ether <chem>C2H6O</chem> m.p. <u>-140</u> b.p. <u>-24</u>
3	propane <chem>C3H8</chem> m.p. <u>-182</u> b.p. <u>-42</u>	propene <chem>C3H6</chem> m.p. <u>-185</u> b.p. <u>-47</u>	n-propyl alcohol <chem>C3H7OH</chem> m.p. <u>-127</u> b.p. <u>97</u>	propanal <chem>C3H7CHO</chem> m.p. <u>-81</u> b.p. <u>49</u>	dimethyl ketone (acetone) <chem>C3H8O</chem> m.p. <u>-94</u> b.p. <u>56</u>	propanoic acid <chem>C3H7COOH</chem> m.p. <u>-2</u> b.p. <u>144</u>	
4	butane <chem>C4H10</chem> m.p. <u>-138</u> b.p. <u>-0.5</u>	1-butene <chem>C4H8</chem> m.p. <u>-165</u> b.p. <u>-6</u>	n-butyl alcohol <chem>C4H9OH</chem> m.p. <u>-90</u> b.p. <u>117</u>	butanal <chem>C4H9CHO</chem> m.p. <u>-99</u> b.p. <u>76</u>	ethyl methyl ketone <chem>C4H10O</chem> m.p. <u>-86</u> b.p. <u>80</u>	butanoic acid <chem>C4H9COOH</chem> m.p. <u>-6</u> b.p. <u>164</u>	diethyl ether <chem>C4H10O</chem> m.p. <u>-116</u> b.p. <u>35</u>
5	pentane <chem>C5H12</chem> m.p. <u>-129</u> b.p. <u>36</u>	1-pentene <chem>C5H10</chem> m.p. <u>-138</u> b.p. <u>30</u>	n-pentyl alcohol <chem>C5H11OH</chem> m.p. <u>-79</u> b.p. <u>138</u>	pentanal <chem>C5H11CHO</chem> m.p. <u>-91</u> b.p. <u>133</u>	diethyl ketone <chem>C5H12O</chem> m.p. <u>-48</u> b.p. <u>103</u>	pentanoic acid <chem>C5H11COOH</chem> m.p. <u>-34</u> b.p. <u>186</u>	
6	hexane <chem>C6H14</chem> m.p. <u>-95</u> b.p. <u>69</u>	1-hexene <chem>C6H12</chem> m.p. <u>-140</u> b.p. <u>63</u>	n-hexyl alcohol <chem>C6H13OH</chem> m.p. <u>-47</u> b.p. <u>158</u>	hexanal <chem>C6H13CHO</chem> m.p. <u>-56</u> b.p. <u>128</u>		hexanoic acid <chem>C6H13COOH</chem> m.p. <u>-3</u> b.p. <u>205</u>	diisopropyl ether <chem>C6H14O</chem> m.p. <u>-60</u> b.p. <u>69</u>
7	heptane <chem>C7H16</chem> m.p. <u>-91</u> b.p. <u>98</u>	1-heptene <chem>C7H14</chem> m.p. <u>-119</u> b.p. <u>94</u>	n-heptyl alcohol <chem>C7H15OH</chem> m.p. <u>-34</u> b.p. <u>176</u>	heptanal <chem>C7H15CHO</chem> m.p. <u>-42</u> b.p. <u>154</u>	diisopropyl ketone <chem>C7H16O</chem> m.p. <u>-85</u> b.p. <u>151</u>	heptanoic acid <chem>C7H15COOH</chem> m.p. <u>-8</u> b.p. <u>223</u>	
8	octane <chem>C8H18</chem> m.p. <u>-57</u> b.p. <u>126</u>	1-octene <chem>C8H16</chem> m.p. <u>-102</u> b.p. <u>121</u>	n-octyl alcohol <chem>C8H17OH</chem> m.p. <u>-17</u> b.p. <u>195</u>	octanal <chem>C8H17CHO</chem> m.p. <u>171</u>		octanoic acid <chem>C8H17COOH</chem> m.p. <u>11</u> b.p. <u>239</u>	di-t-butyl ether <chem>C8H18O</chem> m.p. <u>11</u> b.p. <u>239</u>

increase of attraction due to v.d.W. increase

v.d.W. v.d.W. v.d.W. v.d.W. v.d.W. v.d.W. v.d.W.
dipole DIPOLE DIPOLE dipole H-BOND dipole