

```

10 ***** [1416]
20 * C H E M Y S T I C V1.0 * [1308]
30 * by * [875]
40 *Henning Roes & Dominique Jepsen* [1310]
50 * * [1206]
60 * 2300 Kiel 14 * [917]
70 * * [1392]
80 ***** [1416]
90 DEFINIT a-z:DEFREAL c,d,g,p,s [1811]
100 MODE 1:INK 1,24:INK 2,17:INK 3,10:INK [4274]
0,0:BORDER 0:PEN 1:PAPER 0
110 DATA 9,3,3,C H E M Y S T I C V1.0,12 [6966]
,9,1,Copyright 1987 by,15,12,2,Henning Ro
es,21,14,1,&,13,16,2,Dominique Jepsen,15,2
4,1,Bitte warten
120 FOR n=1 TO 6:READ a,b,c,a$:PEN c:FOR m [3319]
=1 TO LEN(a$)
130 LOCATE a,b:PRINT MID$(a$,m,1):a=a+1:FO [6498]
R x=1 TO 150:NEXT:NEXT:FOR x=1 TO 800:NEXT
:NEXT
140 KEY DEF 72,1,240:KEY DEF 73,1,241:KEY [9281]
DEF 74,1,242:KEY DEF 75,1,243:KEY DEF 76,1
,224:KEY DEF 69,1,97,65,234:KEY DEF 42,1,1
17,85,236:KEY DEF 34,1,111,79,235
150 KEY DEF 5,1:KEY DEF 13,1:KEY DEF 14,1: [2454]
KEY DEF 15,1:KEY DEF 20,1
160 WINDOW#1,5,40,5,23:WINDOW#2,1,40,25,25 [5111]
:PEN#1,1:PAPER#2,1:PEN#2,0:DEG
170 DIM sy$(103),el$(103),sd(103),sm(103), [11715]
fm$(50),na$(50),bm$(50),gw(103),x(103),y(1
03),me$(5),ume$(5,5),me(5),po(5),fb(5),ff$
(3),eig$(8),si(45),co(45),m(7),s(7),dc(103
),k(50),z(50),gas$(6),ind$(4)
180 FOR n=0 TO 45 STEP 2:si(n)=SIN(n):co(n) [4049]
=COS(n):NEXT
190 nu=1:st=20:gra=1:push=42331:pop=42343: [5257]
fe$="Nicht vorhanden"
200 IF HIMEM>42400 THEN SYMBOL AFTER 212 [2442]
210 MEMORY 25935:FOR s=42331 TO 42395:READ [3547]
a:POKE s,a:NEXT
220 OPENOUT"d":MEMORY HIMEM-1:CLOSEOUT [2613]
230 DATA 33,0,192,17,80,101,1,255,63,237,1 [11642]
,76,201,33,80,101,17,0,192,1,255,63,237,176
,201,229,42,153,165,34,128,188,58,155,165,
50,130,188,205,128,188,33,115,165,34,129,1
88,33,128,188,54,195,225,216,200,254,26,55
,63,192,183,55,201,223,139,168
240 IF PEEK(&19)=&B THEN POKE &BC80,195:P [4924]
OKE &BC81,115:POKE &BC82,165
250 SYMBOL 230,0,0,14,17,35,44,40,16:SYMBOL [3738]
L 231,0,0,112,248,252,124,60,56
260 SYMBOL 232,16,16,8,15,15,15,7:SYMBOL 2 [4113]
33,36,36,68,200,240,192,128
270 SYMBOL 234,72,0,120,12,124,204,118:SYM [3081]
BOL 235,36,0,60,102,102,102,60
280 SYMBOL 236,68,0,102,102,102,102,62:SYM [5575]
BOL 237,14,10,14:SYMBOL 238,90,60,102,102,
126,102,102
290 kern1$=CHR$(230)+CHR$(231):kern2$=CHR$ [2265]
(232)+CHR$(233)
300 FOR n=213 TO 222:READ a,b,c,d,e:SYMBOL [4560]
n,0,0,0,a,b,c,d,e:NEXT
310 FOR n=0 TO 9:KEY n,CHR$(213+n):NEXT [2213]
320 DATA 56,40,40,40,56,16,48,16,16,56,56, [6729]
8,56,32,56,56,8,56,8,56,40,40,56,8,56,32
,56,8,56,56,32,56,40,56,56,8,16,16,16,56,4
0,56,40,56,56,40,56,8,56
330 FOR n=1 TO 103:READ sy$(n),el$(n),x(n) [4144]
,y(n),gw(n),sm(n),sd(n),dc(n):NEXT
340 FOR n=1 TO 5:READ me$(n),me(n),po(n):F [4256]
OR m=1 TO me(n):READ ume$(n,m):NEXT:NEXT
350 FOR n=1 TO 7:READ a$:eig$(n)=CHR$(15)+ [3414]
CHR$(2)+a$+CHR$(15)+CHR$(1):NEXT
360 FOR n=1 TO 3:READ a$:fff$(n)=CHR$(15)+C [3508]
HR$(2)+a$+CHR$(15)+CHR$(1):NEXT
370 FOR n=1 TO 7:READ m(n):NEXT [1786]
380 FOR n=1 TO 6:READ gas$(n):NEXT [2382]
390 el$(42)="Molybd"+CHR$(234)+"n":el$(55) [12365]
="C"+CHR$(234)+"sium":sy$(53)="J"+CHR$(24)
+"I"+CHR$(24):ume$(3,2)="B1"+CHR$(234)+"tt
ern":ume$(3,3)=CHR$(238)+"ndern":ume$(4,
4)="S"+CHR$(234)+"ure+Met":ind$(2)=CHR$(21
5):ind$(3)=CHR$(216):ind$(4)=CHR$(217)
400 DATA H,Wasserstoff,1,1,1.01,-259.2,-25 [9803]
2.8,0.071,He,Helium,35,1,4,-272.1,-268.9,0
.13,Li,Lithium,1,3,6.9,1347,180.5,0.53,Be,

```

```

Beryllium,3,3,9,1285,2477,1.85
410 DATA B,Bor,25,3,10.8,2180,3660,2.46,C, [9407]
Kohlenstoff,27,3,12,3750,3370,3.514,N,Stic
kstoff,29,3,14,-210,195.8,1.03,O,Sauerstof
f,31,3,16,-218.8,-183,1.27
420 DATA F,Flour,33,3,19,-219.6,-187.5,1.1 [8773]
1,Ne,Neon,35,3,20.2,-248.6,-246.1,1.204,Na
,Natrium,1,5,23,97.8,881.3,0.97,Mg,Magnesi
um,3,5,24.3,650,1105,1.74
430 DATA Al,Aluminium,25,5,27,660.2,2330,2 [8414]
.7,Si,Silicium,27,5,28.1,1410,2477,2.33,P,
Phosphor,29,5,31,44.2,280.5,1.82,S,Schwefe
l,31,5,32.1,119.6,444.6,2.06
440 DATA Cl,Chlor,33,5,35.5,101,-34.1,1.57 [9535]
,Ar,Argon,35,5,39.9,-189.4,-185.9,1.37,K,K
alium,1,7,39.1,63.6,753.8,0.86,Ca,Calcium,
3,7,40.1,845,1483,1.54
450 DATA Sc,Scandium,5,7,45,1539,2832,2.99 [9005]
,Ti,Titan,7,7,47.9,1677,3267,4.51,V,Vanadi
um,9,7,50.9,1919,3400,6.09,Cr,Chrom,11,7,5
2,1903,2640,7.14
460 DATA Mn,Mangan,13,7,54.9,1247,2030,7.4 [8592]
4,Fe,Eisen,15,7,55.8,1539,3070,7.87,Co,Kob
alt,17,7,58.9,1492,3100,8.89,Ni,Nickel,19,
7,58.7,1452,2730,8.91
470 DATA Cu,Kupfer,21,7,63.5,1083,2595,8.9 [7576]
2,Zn,Zink,23,7,65.4,419.4,908.5,7.14,Ga,Ga
llium,25,7,69.7,29.8,2250,5.91,Ge,Germani
um,27,7,72.6,947.4,2830,5.32
480 DATA As,Arsen,29,7,74.9,8.17,616,5.72, [6576]
Se,Selen,31,7,79,220.5,684.8,4.82,Br,Brom,
33,7,79.9,-7.3,58.8,3.14,Kr,Krypton,35,7,8
3.8,-157.2,-153.4,2.155
490 DATA Rb,Rubidium,1,9,85.5,38.9,688,1.5 [8183]
4,Sr,Strontium,3,9,88.9,77.1,1385,2.63,Y,Yt
trium,5,9,88.9,1552,3337,4.47,Zr,Zirkonium
,7,9,91.2,2128,3578,6.51
500 DATA Nb,Niob,9,9,92.9,2468,4930,8.58,M [7070]
o,M,11,9,95.9,2620,3410,10.28,Tc,Techneti
um,13,9,98,2250,4700,11.49,Ru,Ruthenium,15,
9,101.1,2450,4150,12.45
510 DATA Rh,Rhodium,17,9,102.9,1960,3670,1 [8939]
2.41,Pd,Palladium,19,9,106.4,1552,2930,12.2
02,Ag,Silber,21,9,107.9,960.8,2212,10.49,C
d,Cadmium,23,9,112.4,320.9,767.3,8.642
520 DATA In,Indium,25,9,114.8,156.2,2070,7 [8421]
.31,Sn,Zinn,27,9,118.9,231.9,2687,7.29,Sb,
Antimon,29,9,121.8,630.5,1635,6.69,Te,Tell
ur,31,9,127.6,449.8,1390,6.25
530 DATA JI,Jod,33,9,126.9,113.6,185.24,4. [8097]
94,Xe,Xenon,35,9,131.3,-111.8,-108.1,3.52,
Cs,C,1,11,132.9,28.5,705,1.91,Ba,Barium,3,
11,137.3,726,1696,3.62
540 DATA La,Lanthan,7,16,138.9,920,3454,6. [7298]
16,Ce,Cer,9,16,140.1,798,3257,6.77,Pr,Pras
eodym,11,16,140.9,935,3017,6.48,Nd,Neodym,
13,16,144.2,2,1016,3127,7.01
550 DATA Pm,Promethium,15,16,145,1168,2730 [6433]
,7.22,Sm,Samarium,17,16,150.4,1072,1900,7.
54,Eu,Europium,19,16,152,826,1439,5.25,Gd,
Gadolinium,21,16,157.3,1312,3000,7.89
560 DATA Tb,Terbium,23,16,158.9,1356,2480, [9447]
8.25,Dy,Dysprosium,25,16,162.5,1407,2335,8
.56,Ho,Holmium,27,16,164.9,1470,2720,8.78,
Er,Erbium,29,16,167.3,1522,2510,9.05
570 DATA Tm,Thulium,31,16,168.9,1545,1725, [9278]
9.32,Yb,Ytterbium,33,16,173.1,816,1193,6.9
7,Lu,Lutetium,35,16,175,1675,3315,9.84,Hf,
Hafnium,7,11,178.5,2150,5400,13.31
580 DATA Ta,Tantal,9,11,180.9,2996,5425,16 [7877]
.68,W,Wolfram,11,11,183.9,3410,5700,19.26,
Re,Rhenium,13,11,186.2,3180,5870,21.03,Os,
Osmium,15,11,190.2,5020,3050,22.61
590 DATA Ir,Iridium,17,11,192.2,2454,4530,2 [8605]
2.65,Pt,Platin,19,11,195.1,1769.3,3830,21.
45,Au,Gold,21,11,197,1063,2660,19.32,Hg,Qu
ecksilber,23,11,200.6,-38.8,357,13.53
600 DATA Tl,Thallium,25,11,204.4,302.5,145 [6866]
3,11.85,Pb,Blei,27,11,207.2,327.4,1751,11.
34,Bi,Wismut,29,11,209,271,1580,9.8,Po,Po
lonium,31,11,209,254,962,9.2
610 DATA At,Astat,33,11,210,300,370,,Rn,Ra [7699]
don,35,11,222,-71.1,-62.1,4.4,Fr,Francium,
1,13,223,30,680,,Ra,Radium,3,13,226,700,11
40,5.5
620 DATA Ac,Actinium,7,18,227,1050,3300,10 [8894]
.07,Th,Thorium,9,18,232,1755,4800,11.72,Pa
,Protactinium,11,18,231,1568,4200,15.37,U,
Uran,13,18,238,1132,3900,18.97
630 DATA Np,Neptunium,15,18,237,639,3900,2 [6502]
0.48,Pu,Plutonium,17,18,244,639.5,3200,19.

```

```

74,Am,Americium,19,18,243,1173,2600,13.67
640 DATA Cm,Curium,21,18,247,1350,,13.51,B [7057]
k,Berkelium,23,18,247,986,,13.25,Cf,Califo
rniun,25,18,251,900,,,Es,Einsteinium,27,18
,252,,,
650 DATA Fm,Fermium,29,18,257,,,Md,Mende [6400]
evium,31,18,258,,,No,Nobelium,33,18,259,,
,,Lr,Lawrencium,35,18,260,,,
660 DATA PERIOD,,1,SUCHEN,3,8,"Name ",, [10519]
Symbol ",Ord.zahl,FORMELN1,5,15,Eingeben,
,,Suchen ",,Lernen ",FORMELN2,5,24,"Lad
en ",Speichern,Met+NiMet,,Laugenbd.,EXT
RAS,4,33,"Uhr ",,Wecker,"Farbe ",,ENDE
670 DATA "Name:",,Symbol:",,A masse:",,Ord [10970]
nungszahl:",,Siedepunkt:",,Schmelzpunkt:",
"Dichte:",,Formel:",,Name ",,Bemerkk.:",
,2,8,18,32,50,72,98
680 DATA N,O,F,Cl,H,Br [890]
690 ** Periodensystem [1090]
700 CLS [91]
710 FOR n=1 TO 103:LOCATE#1,x(n),y(n):PRIN [3683]
#1,sy$(n):NEXT
720 PEN 2:LOCATE 1,20:PRINT"Lanthan":LOCAT [3112]
E 1,22:PRINT"Actinium"
730 FOR n=75 TO 81:LOCATE 1,2*n-145:PRINT [1521]
CHR$(n):NEXT
740 FOR n=121 TO 365 STEP 32:MOVE 0,n:DRA [2551]
W 640,0,2:NEXT
750 FOR n=63 TO 639 STEP 32:MOVE n,121:DRA [1967]
W 0,224:NEXT
760 FOR n=159 TO 639 STEP 32:MOVE n,41:DRA [2228]
W 0,64:NEXT
770 FOR n=41 TO 105 STEP 32:MOVE 0,n:DRAWR [1971]
640,0:NEXT
780 TAG:PLOT 72,360,2:PRINT"1 2"SPC(21)"3 [3978]
4 5 6 7 8":TAGOFF
790 PEN 1:LOCATE 1,1:FOR n=1 TO 5:PRINT me [3128]
$(n)":NEXT
800 LOCATE#2,4,1:PRINT#2,"Uhrzeit":LOCATE [3381]
#2,22,1:PRINT#2,"Weckzeit":PEN#2,3
810 CALL push [263]
820 CHAIN MERGE"chester" [1185]

10 CLOSEIN:EVERY 3000,0 GOSUB 2520:GOSUB 2 [2639]
550
20 ** Menue [476]
30 GOSUB 2570:GOSUB 2560 [1148]
40 IF w=224 THEN ON nu GOSUB 260,100,100,1 [4948]
00,100:CALL pop:GOSUB 2550:GOTO 30
50 LOCATE po(nu),1:PRINT me$(nu) [1642]
60 IF w=242 THEN nu=nu-1:IF nu=0 THEN nu=5 [2022]
70 IF w=243 THEN nu=nu+1:IF nu=6 THEN nu=1 [2164]
80 GOTO 30 [340]
90 ** Untermenue [636]
100 y=1 [354]
110 a=po(nu):b=LEN(ume$(nu,1)):c=2:d=me(nu [4784]
):GOSUB 2220
120 FOR n=1 TO me(nu):PRINT ume$(nu,n):NE [2590]
XT
130 LOCATE 1,y:PRINT CHR$(24)ume$(nu,y)CHR [4338]
$(24);
140 GOSUB 2560 [827]
150 IF w=9 THEN gra=(gra+1)MOD 2 [2181]
160 IF w=224 THEN 220 [1417]
170 IF w=13 THEN WINDOW 1,40,1,25:RETURN [1845]
180 LOCATE 1,y:PRINT ume$(nu,y); [2944]
190 IF w=240 THEN y=y-1:IF y=0 THEN y=me(n [2640]
u)
200 IF w=241 THEN y=y+1:IF y=me(nu)+1 THEN [2679]
y=1
210 GOTO 130 [371]
220 ON 5*nu-10+y GOSUB 460,460,410,230,230 [4933]
,530,1110,1250,830,630,950,1640,1860,2
040,1520,1520,1440,1590,230
230 CALL pop:GOSUB 2570:GOSUB 2550 [1410]
240 GOTO 110 [423]
250 ** Periodensystem [1090]
260 n=1 [236]
270 LOCATE#1,x(n),y(n):PEN#1,3:PRINT#1,sy$ [4277]
(n):aa=n:MOVE x(n)*16+78,352-16*y(n):DRAW
0,-16,2
280 GOSUB 2560 [827]
290 IF w=9 THEN gra=(gra+1)MOD 2 [2181]
300 IF w=224 THEN GOSUB 2250:CALL pop:GOSU [4273]
B 2550:GOTO 270
310 IF w=13 THEN RETURN [795]
320 IF w=242 THEN n=n+(n>1) [1843]
330 IF w=243 THEN n=n-(n<103) [1153]
340 IF w=240 THEN r=1:t=-1:GOSUB 380 [1647]
350 IF w=241 THEN r=103:t=1:GOSUB 380 [3012]
360 LOCATE#1,x(aa),y(aa):PEN#1,1:PRINT#1,s [3960]
y$(aa):MOVE x(aa)*16+78,352-16*y(aa):DRAW
0,-16
370 GOTO 270 [415]
380 FOR m=n+t TO r STEP t:IF x(m)=x(n)THEN [2995]
n=m:m=r
390 NEXT:RETURN [940]
400 ** Ordnungszahl [877]
410 a=6:b=20:c=5:d=3:GOSUB 2220 [1993]
420 PRINT eig$(4):INPUT"",n [639]
430 IF n<1 OR n>103 THEN PRINT fe$:GOSUB 2 [3388]
560 RETURN
440 GOSUB 2250:RETURN [918]
450 ** Symbol+Name [1268]
460 a=6:b=20:c=5:d=3:e=0:GOSUB 2220:PRINT [3950]
eig$(y):INPUT"",a$
470 FOR n=1 TO 103 [926]
480 IF UPPER$(a$)=UPPER$(e1$(n))OR UPPER$( [4227]
a$)=UPPER$(sy$(n))THEN e=n:n=103:GOTO 490
490 NEXT [350]
500 IF e>0 THEN n=e:GOSUB 2250:RETURN [1769]
510 PRINT fe$:GOSUB 2560:RETURN [1107]
520 ** F.eingeben [839]
530 a=8:b=27:c=6:d=9:GOSUB 2220:GOTO 590 [2352]
540 CLS:LEN 3:LOCATE 1,1:PRINT"Formelzahl: [3147]
":PEN 1:PRINT az
550 LOCATE 1,3:PRINT ff$(1):INPUT"",fm$(a [1467]
z)
560 IF fm$(az)=""THEN az=az-1:RETURN [2339]
570 LOCATE 1,5:PRINT ff$(2):INPUT"",na$(a [1737]
z)
580 LOCATE 1,7:PRINT ff$(3):INPUT"",bm$(a [1945]
z)
590 az=az+1 [697]
600 IF az=51 THEN GOSUB 2560:RETURN [2853]
610 GOTO 540 [425]
620 ** F.lernen [565]
630 a=8:b=27:c=8:d=9:GOSUB 2220 [1487]
640 f=0:r=0:FOR n=1 TO az:k(n)=0:NEXT [2885]
650 INPUT"(F)ormel (N)ame";a$:CLS [1823]
660 IF UPPER$(a$)="F"THEN fo=1 ELSE fo=0 [1811]
670 FOR n=1 TO az:CLS [601]
680 PEN 2:PRINT"Richtig:":PEN 1:PRINT r:L [6088]
OCATE 14,1:PEN 2:PRINT"Falsch:":PEN 1:PRI
NT f
690 m=INT(RND*az)+1:IF k(m)=1 THEN 690 [1883]
700 LOCATE 1,3:IF fo THEN 720 [815]
710 PRINT ff$(2)+na$(m):LOCATE 1,5:PRINT f [2459]
f$(1):GOTO 730
720 PRINT ff$(1)+fm$(m):LOCATE 1,5:PRINT f [2798]
f$(2);
730 INPUT"",a$:a$=UPPER$(a$):IF a$="E"THEN [3005]
k=n-1:n=az:GOTO 800
740 IF fo THEN 770 [117]
750 IF a$<>UPPER$(fm$(m))THEN f=f+1:z(f)=m [3546]
:PRINT"Falsch: "fm$(m)ELSE r=r+1
760 GOTO 780 [409]
770 IF a$<>UPPER$(na$(m))THEN f=f+1:z(f)=m [4364]
:PRINT"Falsch: "na$(m)ELSE r=r+1
780 PEN 1:LOCATE 9,1:PRINT r:LOCATE 21,1:P [3088]
RINT f
790 GOSUB 2560 [827]
800 NEXT [350]
810 RETURN [555]
820 ** F.suchen [827]
830 a=6:b=8:c=6:d=8:h=0:GOSUB 2220 [1875]
840 LOCATE 1,3:PRINT ff$(1):LOCATE 1,5:PRI [5159]
NT ff$(2):LOCATE 1,7:PRINT ff$(3)
850 fla=1:GOSUB 1280:a$=UPPER$(a$) [1336]
860 FOR n=1 TO az [636]
870 IF m=1 THEN IF a$=UPPER$(fm$(n))THEN 9 [2657]
10
880 IF m=2 THEN IF a$=UPPER$(na$(n))THEN 9 [2292]
10
890 IF m=3 THEN IF a$=UPPER$(be$(n))THEN 9 [2275]
10
900 GOTO 920 [332]
910 GOSUB 1120:h=1:n=az:fla=0 [1482]
920 NEXT [350]
930 IF h=0 THEN PRINT f$:GOSUB 2560:RETURN [4629]
ELSE h=0:GOSUB 2560:RETURN
940 ** Daten speichern+laden [1399]
950 a=4:b=20:c=5:d=9:GOSUB 2220 [1693]
960 a$="*.che":DIR,ea$ [1143]

```

```

970 a=20:b=13:c=14:d=3:GOSUB 2220 [1785]
980 PEN 2:PRINT"Dateiname:":PEN 1 [1854]
990 LOCATE 1,3:INPUT"",a$ [617]
1000 IF a$=""THEN RETURN [1147]
1010 IF INSTR(a$,".")>0 OR LEN(a$)>8 THEN [1772]
990
1020 a$=a$+".che" [385]
1030 IF y=1 THEN 1070 [1078]
1040 OPENOUT a$ [765]
1050 PRINT#9,az:FOR n=1 TO az:WRITE#9,fm$( [3954]
n),na$(n),bm$(n):NEXT
1060 CLOSEOUT:RETURN [1447]
1070 OPENIN a$ [715]
1080 INPUT#9,az:FOR n=1 TO az:INPUT#9,fm$( [3322]
n),na$(n),bm$(n):NEXT
1090 CLOSEIN:RETURN [651]
1100 '** Blaettern [1004]
1110 n=1:IF az=0 THEN RETURN [615]
1120 a=8:b=27:c=6:d=9:GOSUB 2220 [1738]
1130 LOCATE 1,1:PEN 3:PRINT"Formelnr.:":P [2625]
EN 1:PRINT n
1140 PRINT:PRINT ff$(1)+fm$(n) [1406]
1150 LOCATE 1,5:PRINT ff$(2)+na$(n) [1729]
1160 LOCATE 1,7:PRINT ff$(3)+bm$(n) [1690]
1170 IF fla=1 THEN RETURN [883]
1180 GOSUB 2560 [827]
1190 IF w=240 THEN n=n+1:IF n=az+1 THEN n= [1808]
1
1200 IF w=241 THEN n=n-1:IF n=0 THEN n=az [2587]
1210 IF w=224 AND flag=1 THEN fl=1:RETURN [2247]
1220 IF w=13 THEN RETURN [795]
1230 CLS:GOTO 1130 [1025]
1240 '** F.aendern [898]
1250 n=1 [236]
1260 flag=1:fl=0:GOSUB 1120 [1658]
1270 IF fl=0 THEN flag=0:RETURN [1485]
1280 m=1 [184]
1290 LOCATE 1,2*m+1:PRINT CHR$(24)MID$(ff$ [2937]
(m),3,8)CHR$(24)
1300 GOSUB 2560 [827]
1310 IF w=224 THEN 1360 [1498]
1320 LOCATE 1,2*m+1:PRINT ff$(m) [1909]
1330 IF w=240 THEN m=m-1:IF m=0 THEN m=3 [1665]
1340 IF w=241 THEN m=m+1:IF m=4 THEN m=1 [2512]
1350 GOTO 1290 [353]
1360 a=18:b=20:c=14:d=3:GOSUB 2220 [2053]
1370 IF fla=1 THEN PEN 2:PRINT"Suchbegriff [4658]
":PEN 1:LOCATE 1,2:INPUT a$:RETURN
1380 PEN 2:PRINT"Neuer Inhalt:":PEN 1 [1872]
1390 LOCATE 1,2:INPUT"",a$ [802]
1400 IF m=1 THEN fm$(n)=a$ [1654]
1410 IF m=2 THEN na$(n)=a$ ELSE bm$(n)=a$ [1979]
1420 GOTO 1260 [351]
1430 '** Farben [559]
1440 a=10:b=9:c=5:d=5:GOSUB 2220 [2381]
1450 PRINT"f0 Paper f1 Pen 1 f2 Pen 2 f3 P [4284]
en 3 f4 Border";
1470 i$=INKEY$:IF i$<>" "THEN i=ASC(i$)ELSE [2438]
1470
1480 IF i=13 THEN RETURN [1326]
1490 FOR n=1 TO 5:IF i=212+n THEN fb(n)=fb [5271]
(n)+1:IF fb(n)>26 THEN fb(n)=0:INK n-1,fb(
n)ELSE INK n-1,fb(n)
1500 NEXT:BORDER fb(5):GOTO 1470 [1147]
1510 '** Uhr/Wecker [813]
1520 a=10:b=17:c=5:d=3:GOSUB 2220 [2205]
1530 PRINT"Stunden,Minuten:" [1824]
1540 LOCATE 1,3:INPUT"(St,Mi)",e,f [1747]
1550 IF e>24 OR e<0 OR f>60 OR f<0 THEN 15 [3252]
40
1560 IF y=2 THEN wmi=f:ws=e ELSE mi=f:st=e [2357]
1570 RETURN [555]
1580 '** ENDE [542]
1590 a=7:b=16:c=7:d=3:GOSUB 2220 [2184]
1600 PRINT:PRINT"Beenden (J/N) ?" [1708]
1610 GOSUB 2560:IF UPPER$(a$)<>"J"THEN RET [3794]
URN
1620 INK 1,24:INK 0,1:BORDER 1:PEN 1:PAPER [2718]
0:MODE 2:END
1630 '** Met-NiMet [469]
1640 a=4:b=22:c=5:d=4:GOSUB 2220 [2349]
1650 r=4:GOSUB 2580 [754]
1660 PEN 2:PRINT"Das Nichtmetall:":PEN 1: [5557]
INPUT"",n$:IF n$=""THEN 1660
1670 PEN 2:PRINT"Wertigkeit:":PEN 1:INPUT [4487]
"",wn:IF wn<1 OR wn>4 THEN 1670
1680 a=6:b=30:c=8:d=7:GOSUB 2220 [2027]
1690 GOSUB 2170:gm=0:gn=0:FOR i=1 TO 6:IF [3135]
m$=gas$(i)THEN gm=1
1700 NEXT:FOR i=1 TO 6:IF n$=gas$(i)THEN g [2259]
n=1
1710 NEXT [350]
1720 IF gm=1 AND am=2 THEN mf$=m$+ind$(2): [5554]
am$=""ELSE IF gm=1 AND am=4 THEN mf$=m$+in
d$(2):am$="2"ELSE mf$=m$:um=1:IF am=1 THEN
am$=""ELSE am$=STR$(am)
1730 IF gn=1 AND an=2 THEN nf$=n$+ind$(2): [7677]
an$=""ELSE IF gn=1 AND an=4 THEN nf$=n$+in
d$(2):an$="2"ELSE nf$=n$:un=1:IF an=1 THEN
an$=""ELSE an$=STR$(an)
1740 IF um=1 AND gm=1 THEN um=1 ELSE um=0 [1631]
1750 IF un=1 AND gn=1 THEN un=1 ELSE un=0 [1297]
1760 CLS:PRINT [356]
1770 PRINT am$mf$ + "an$nf$" -> "m$ind$(a [2881]
m)n$ind$(an)
1780 IF um=1 OR un=1 THEN PRINT:PRINT"Verd [4077]
oppeln":PRINT ELSE 1840
1790 IF gm=1 AND am=1 THEN am$=""ELSE IF g [3356]
m=1 THEN am$=STR$(am)
1800 IF gm=1 THEN mf$=m$+ind$(2)ELSE mf$=S [1287]
TR$(am*2)+m$:am$=""
1810 IF gn=1 AND an=1 THEN an$=""ELSE IF g [3392]
n=1 THEN an$=STR$(an)
1820 IF gn=1 THEN nf$=n$+ind$(2)ELSE nf$=S [2326]
TR$(an*2)+n$:an$=""
1830 PRINT am$mf$ + "an$nf$" -> 2"m$ind$( [2686]
am)n$ind$(an)
1840 GOSUB 2560:RETURN [1840]
1850 '** Saeure+Met [1238]
1860 a=4:b=22:c=5:d=4:GOSUB 2220 [2349]
1870 PEN 2:PRINT"Die Saeure:":PEN 1:INPUT [5449]
"",sa$:IF LEN(sa$)<2 THEN 1860
1880 r=3:GOSUB 2580 [1476]
1890 a=5:b=34:c=8:d=7:GOSUB 2220 [2008]
1900 wn=1:FOR i=2 TO 3:IF MID$(sa$,2,1)=in [2202]
d$(i)THEN wn=i
1910 NEXT:IF ASC(MID$(sa$,2,1))>122 AND wn [3751]
=1 THEN CLS:GOTO 1860
1920 IF wn=1 THEN n$=MID$(sa$,2)ELSE n$=MI [2016]
D$(sa$,3)
1930 GOSUB 2170 [873]
1940 IF LEN(n$)>1 AND an>1 AND MID$(n$,2,1 [1980]
)<"a"THEN kn$="("+n$+)" "ELSE kn$=n$
1950 IF am>1 THEN am$=STR$(am)ELSE am$="" [848]
1960 IF an>1 THEN an$=STR$(an)ELSE an$="" [1434]
1970 ah=an*wn:IF ah MOD 2=0 THEN h$=STR$(a [5748]
h/2)+"H"+ind$(2):h=0 ELSE h$=STR$(an*wn)+"
H":h=1
1980 IF LEFT$(h$,2)=" 1"THEN h$=MID$(h$,3) [1260]
1990 f$=m$+ind$(am)+kn$+ind$(an) [2169]
2000 CLS:PRINT:PRINT am$m$ + "an$sa$" -> " [1435]
f$" + "h$
2010 PRINT:IF ah=1 OR ah=3 THEN PRINT"Verd [6640]
oppeln":PRINT:PRINT STR$(2*am)m$+"STR$(2*
an)sa$" -> 2"f$"+h$+ind$(2)
2020 GOSUB 2560:RETURN [1840]
2030 '** Laugenbd. [1467]
2040 a=4:b=22:c=5:d=4:GOSUB 2220 [2349]
2050 r=3:GOSUB 2580 [1476]
2060 a=6:b=30:c=8:d=11:GOSUB 2220 [2496]
2070 IF m$="NH"+ind$(3)THEN PRINT:PRINT m$ [4617]
+ "H"+ind$(2)"O -> NH"+ind$(4)"OH":GOTO 215
0
2080 CLS:PRINT"Metall + H"+ind$(2)"O":PRINT [9680]
:IF wm=1 THEN PRINT m$ + "H"+ind$(2)"O -> "
m$(OH) + H":PRINT:PRINT"Verdoppeln":PRINT
:PRINT"2m$" + 2H"+ind$(2)"O -> 2m$(OH) +
H"+ind$(2)
2090 IF wm=2 THEN PRINT m$ + 2H"+ind$(2)"O [3742]
-> "m$(OH)"ind$(2)" + H"+ind$(2)
2100 IF wm=3 THEN PRINT m$ + 3H"+ind$(2)"O [6955]
-> "m$(OH)"ind$(3)" + 3H":PRINT:PRINT"Ve
rdoppeln":PRINT:PRINT"2m$" + 6H"+ind$(2)"O
-> 2m$(OH)"ind$(3)" + 3H"+ind$(2)
2110 PRINT:PRINT"Metalloxyd + H"+ind$(2)"O" [4109]
:PRINT
2120 IF wm=1 THEN PRINT m$ind$(2)"O + H"+in [3876]
d$(2)"O -> 2m$(OH)
2130 IF wm=2 THEN PRINT m$"O + H"+ind$(2)"O [3798]
-> "m$(OH)"ind$(2)
2140 IF wm=3 THEN PRINT m$ind$(2)"O"ind$(3 [2868]
)" + 3H"+ind$(2)"O -> 2m$(OH)"ind$(3)
2150 GOSUB 2560:RETURN [1840]
2160 '** KGV [461]
2170 mk=wm*wn [423]
2180 kl=MIN(wm,wn):gr=MAX(wm,wn) [1141]
2190 IF gr MOD kl=0 THEN kgv=mk/kl ELSE kg [3607]
v=mk
2200 am=kgv/wm:an=kgv/wn:RETURN [2122]
2210 '** Routinen [1128]
2220 WINDOW a,a+b+1,c,c+d+1:CLS:MOVE a*16- [8011]
8,407-c*16:DRAWR b*16+16,0,1:DRAWR 0,-d*16

```

```

-16: DRAW= b*16-16, 0: DRAW 0, d*16+16: IF nu=
5 THEN uu=2 ELSE uu=0
2230 MOVE a*16-16, 415-c*16: DRAW 0, -d*16-3 [4963]
2: DRAW b*16+32-uu, 0: DRAW 0, d*16+32: DRAW
-b*16-32+uu, 0
2240 WINDOW a+1, a+b, c+1, c+d: RETURN [2333]
2250 a=10: b=22: c=3: d=7 [1763]
2260 GOSUB 2220 [879]
2270 PRINT eig$(1)el$(n) [578]
2280 PRINT eig$(2)sy$(n) [1031]
2290 PRINT eig$(3)gw$(n)"u" [1436]
2300 PRINT eig$(4)n [755]
2310 PRINT eig$(5);: IF sd(n)=0 THEN PRINT"
- "; ELSE PRINT sd(n); [4423]
2320 PRINT CHR$(8)CHR$(237)"C": PRINT eig$( [4830]
6);: IF sd(n)=0 THEN PRINT" - "; ELSE PRINT
gm(n);
2330 PRINT CHR$(8)CHR$(237)"C" [2037]
2340 PRINT eig$(7);: IF dc(n)=0 THEN PRINT" [3166]
- "; ELSE PRINT dc(n)" g/ccm"
2350 IF gra=0 THEN 2510 [778]
2360 a=2: b=19: c=c+d+1: d=9: GOSUB 2220 [2431]
2370 ORIGIN a*16, (25-c-d)*16-8 [839]
2380 IF n<3 THEN s(1)=n: sc=1: GOTO 2450 ELS [2150]
E s(1)=2
2390 IF n<11 THEN s(2)=n-2: sc=2: GOTO 2450 [3328]
ELSE s(2)=8
2400 IF n<19 THEN s(3)=n-10: sc=3: GOTO 2450 [3135]
ELSE s(3)=8
2410 IF n<37 THEN s(3)=s(3)+VAL("&"+MID$(" [9148]
0012355678aaaaaaaa", n-18, 1)): s(4)=VAL("&"+
MID$("122221222212345678", n-18, 1)): sc=4: GO
TO 2450 ELSE s(3)=18: s(4)=8
2420 IF n<55 THEN s(4)=s(4)+VAL("&"+MID$(" [8914]
001245578aaaaaaaa", n-36, 1)): s(5)=VAL("&"+
MID$("122211211012345678", n-36, 1)): sc=5: GO
TO 2450 ELSE s(4)=18: s(5)=8
2430 IF n<87 THEN s(4)=s(4)+VAL("&"+MID$(" [10296]
00023456779abceeeeeeeeeeeeeeeee", n-54, 1)):
s(5)=s(5)+VAL("&"+MID$("001000000100000001
2345679aaaaaaaa", n-54, 1)): s(6)=VAL("&"+MID

```

```

$("12222222222222222222112345678", n-54,
1)): sc=6: GOTO 2450
2440 s(4)=32: s(5)=18: s(6)=8: s(5)=s(5)+VAL( [10014]
"&"+MID$("000023457789abcde", n-86, 1)): s(6)
=s(6)+VAL("&"+MID$("0012111101111111", n-8
6, 1)): s(7)=VAL("&"+MID$("1222222222222222
", n-86, 1)): sc=7
2450 LOCATE 9, 1: PEN 3: PRINT"Schale Max.": P [6572]
EN 1: TAG: PLOT 62, 94, 3: PRINT kern1$:; PLOT 6
2, 78: PRINT kern2$:; TAGOFF
2460 FOR z1=sc TO 1 STEP-1: z2=10+z1*9 [2001]
2470 FOR z3=0 TO 45 STEP 2: z4=z2*si(z3): z5 [2834]
=z2*co(z3)
2480 PLOT 78+z4, 78+z5, 2: PLOT 78+z4, 78-z5: P [8843]
LOT 78-z4, 78+z5: PLOT 78-z4, 78-z5: PLOT 78+z
5, 78+z4: PLOT 78+z5, 78-z4: PLOT 78-z5, 78+z4:
PLOT 78-z5, 78-z4: NEXT
2490 TAG: MOVE 78, 88+z1*9: DRAW 178, 3+z1*18, [7464]
1: PLOT XPOS, YPOS, 2: PRINT CHR$(74+z1)":;: P
LOT XPOS, YPOS, 1: PRINT USING"###"; s(z1);: PLO
T XPOS, YPOS, 2: PRINT USING"###"; m(z1);: TAGO
FF
2500 NEXT: ORIGIN 0, 0 [711]
2510 PEN 1: GOSUB 2560: RETURN [1279]
2520 mi=mi+1: IF mi=60 THEN st=st+1: mi=0 [2546]
2530 IF st=24 THEN st=0 [968]
2540 IF wmi=mi AND ws=st THEN BORDER 0, 24: [2457]
FOR s=1 TO 6000: NEXT: BORDER fb(5)
2550 LOCATE#2, 12, 1: PRINT#2, USING"###:###"; st [7124]
, mi: LOCATE#2, 31, 1: PRINT#2, USING"###:###"; ws,
wmi: RETURN
2560 a$=INKEY$: IF a$="" THEN 2560 ELSE w=AS [2221]
C(a$): RETURN
2570 WINDOW 1, 40, 1, 25: LOCATE po(nu), 1: PRIN [3849]
T CHR$(24)me$(nu)CHR$(24): RETURN
2580 PEN 2: PRINT"Das Metall": PEN 1: INPUT [4644]
"", m$: IF m$="" THEN 2580
2590 IF m$="NH"+ind$(3) THEN RETURN ELSE P [5590]
EN 2: PRINT"Wertigkeit":;: PEN 1: INPUT "", wm:
IF wm<1 OR wm>r THEN 2590
2600 RETURN [555]

```