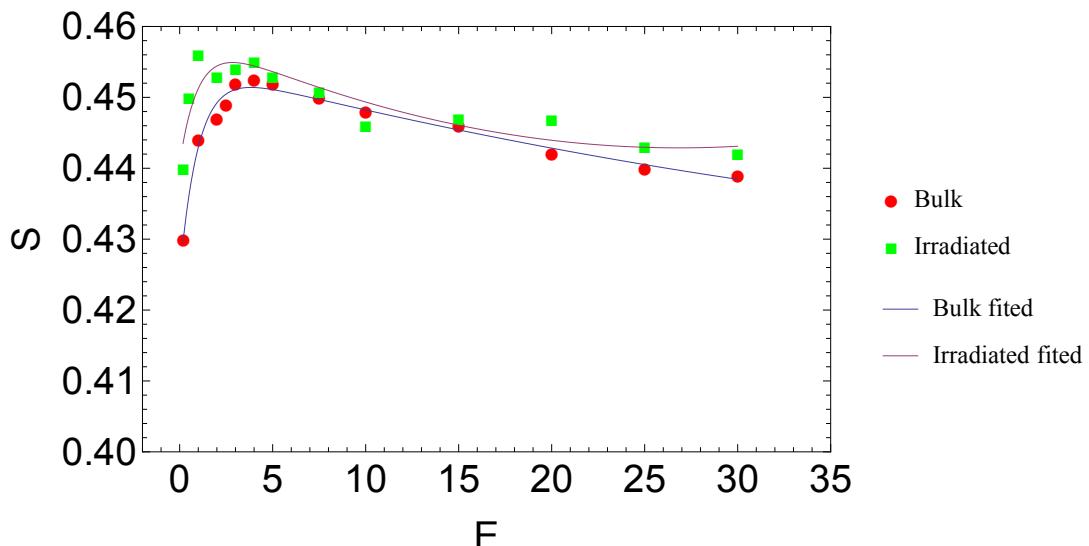


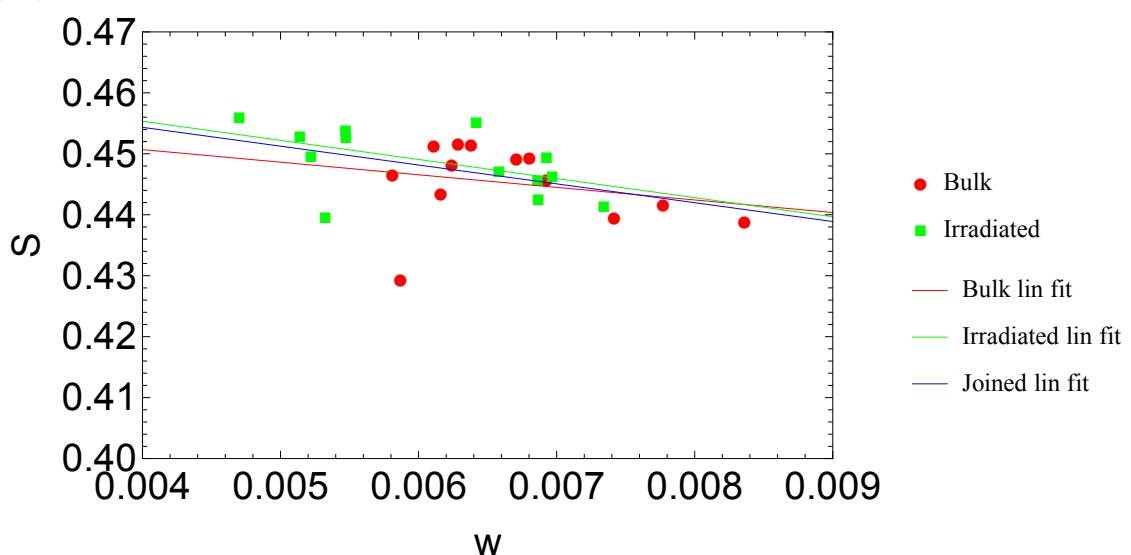
Block 13-point

```
(Debug) In[1264]:= b = {{0.2, 0.43}, {1, 0.444}, {2, 0.447}, {2.5, 0.449},
{3, 0.452}, {4, 0.4525}, {5, 0.4519}, {7.5, 0.45}, {10, 0.44801},
{15, 0.446}, {20, 0.442}, {25, 0.4400}, {30, 0.439}};
irr = {{0.2, 0.44}, {0.5, 0.45}, {1, 0.456}, {2, 0.453}, {3, 0.454},
{4, 0.455}, {5, 0.453}, {7.5, 0.4508}, {10, 0.446},
{15, 0.447}, {20, 0.4468}, {25, 0.4430}, {30, 0.442}};
fb = Fit[b, {1, x, x^2, Exp[-x]}, x];
firr = Fit[irr, {1, x, x^2, Exp[-x]}, x];
Show[ListPlot[{b, irr}, PlotStyle -> {Red, Green},
PlotRange -> {{-2, 35}, {0.4, 0.46}}, PlotMarkers -> {Automatic, 10},
LabelStyle -> Directive[Black, FontSize -> 20, FontFamily -> "Helvetica"],
AxesStyle -> Black, FrameLabel -> {"E", "S"}, Frame -> True,
PlotLegends -> {"Bulk", "Irradiated"}], Plot[{fb, firr},
{x, 0.18, 30}, PlotLegends -> {"Bulk fited", "Irradiated fited"}]]
SWi = {{0.0047, 0.4561}, {0.00514, 0.453}, {0.00522, 0.4497},
{0.005323, 0.4397}, {0.00547, 0.4539000}, {0.005473, 0.4529},
{0.006418, 0.455300}, {0.006582, 0.447300},
{0.006861, 0.445800}, {0.006867, 0.442700},
{0.006926, 0.4495}, {0.006967, 0.4465}, {0.007342, 0.441500}};
SWb = {{0.005811, 0.446600}, {0.005869, 0.429400}, {0.00611, 0.4514},
{0.00616, 0.4435}, {0.006239, 0.44830}, {0.006286, 0.4517},
{0.00638, 0.4515}, {0.006708, 0.449200}, {0.006802, 0.449400},
{0.006926, 0.445800}, {0.007416, 0.4396011},
{0.007771, 0.441700}, {0.00836, 0.4389}};
ListPlot[{SWb, SWi}, PlotStyle -> {Red, Green},
PlotRange -> {{0.004, 0.009}, {0.4, 0.47}}, PlotMarkers -> {Automatic, 10},
LabelStyle -> Directive[Black, FontSize -> 20, FontFamily -> "Helvetica"],
AxesStyle -> Black, Frame -> True, PlotLegends -> {"Bulk", "Irradiated"}];
fbi = Fit[SWb, {1, x}, x];
firri = Fit[SWi, {1, x}, x];
fa = Fit[Sort[Join[SWb, SWi], #1[[1]] < #2[[1]] &], {1, x}, x];
Show[ListPlot[{SWb, SWi}, PlotStyle -> {Red, Green},
PlotRange -> {{0.004, 0.009}, {0.4, 0.47}}, PlotMarkers -> {Automatic, 10},
LabelStyle -> Directive[Black, FontSize -> 20, FontFamily -> "Helvetica"],
AxesStyle -> Black, FrameLabel -> {"w", "S"}, Frame -> True, PlotLegends -> {"Bulk", "Irradiated"}],
Plot[{fbi, firri, fa}, {x, 0.004, 0.009}, PlotStyle -> {Red, Green, Blue},
PlotLegends -> {"Bulk lin fit", "Irradiated lin fit", "Joined lin fit"}]]
Print[StringJoin["Average S(w) bulk= ", ToString[(Mean[SWb][[1]])],
"; ", ToString[(Mean[SWb][[2]])], ";"]]
Print[StringJoin["Average S(w) irr= ", ToString[(Mean[SWi][[1]])],
"; ", ToString[(Mean[SWi][[2]])], ";"]]
Print[StringJoin["S(w) irr - S(w) bulk :: {",
ToString[((Mean[SWi] - Mean[SWb])[1])], ", ", ",
ToString[((Mean[SWi] - Mean[SWb])[2])], "};;"]]
```

(Debug) Out[1268]=



(Debug) Out[1275]=



Average S(w) bulk= {0.00667985 ; 0.445154};

Average S(w) irr= {0.00609915 ; 0.448762};

S(w) irr - S(w) bulk :: {-0.000580692 ; 0.00360761};

**Block 12-point**

```
(Debug) In[1279]:= bm = {{1, 0.444}, {2, 0.447}, {2.5, 0.449}, {3, 0.452},
    {4, 0.4525}, {5, 0.4519}, {7.5, 0.45}, {10, 0.44801},
    {15, 0.446}, {20, 0.442}, {25, 0.4400}, {30, 0.439}};
irrm = {{0.5, 0.45}, {1, 0.456}, {2, 0.453}, {3, 0.454},
    {4, 0.455}, {5, 0.453}, {7.5, 0.4508}, {10, 0.446},
    {15, 0.447}, {20, 0.4468}, {25, 0.4430}, {30, 0.442}};
fbm = Fit[bm, {1, x, x^2, x^3, Exp[-x]}, x];
firrm = Fit[irrm, {1, x, x^2, Exp[-x]}, x];
Show[ListPlot[{bm, irrm}], PlotStyle -> {Red, Green},
    PlotRange -> {{-2, 35}, {0.4, 0.46}}, PlotMarkers -> {Automatic, 10},
    LabelStyle -> Directive[Black, FontSize -> 20, FontFamily -> "Helvetica"],
    AxesStyle -> Black, FrameLabel -> {"E", "S"}, Frame -> True,
    PlotLegends -> {"Bulk - 12", "Irradiated-12"}], Plot[{fbm, firrm},
    {x, 0.18, 30}, PlotLegends -> {"Bulk fited 12", "Irradiated fited 12"}]];
SWim = {{0.0047, 0.4561}, {0.00514, 0.453}, {0.00522, 0.4497},
    {0.00547, 0.4539000}, {0.005473, 0.4529}, {0.006418, 0.455300},
    {0.006582, 0.447300}, {0.006861, 0.445800}, {0.006867, 0.442700},
    {0.006926, 0.4495}, {0.006967, 0.4465}, {0.007342, 0.441500}};
SWbm = {{0.005811, 0.446600}, {0.00611, 0.4514}, {0.00616, 0.4435},
    {0.006239, 0.44830}, {0.006286, 0.4517}, {0.00638, 0.4515},
    {0.006708, 0.449200}, {0.006802, 0.449400}, {0.006926, 0.445800},
    {0.007416, 0.4396011}, {0.007771, 0.441700}, {0.00836, 0.4389}};
ListPlot[{SWbm, SWim}, PlotStyle -> {Red, Green},
    PlotRange -> {{0.004, 0.009}, {0.4, 0.47}}, PlotMarkers -> {Automatic, 10},
    LabelStyle -> Directive[Black, FontSize -> 20, FontFamily -> "Helvetica"],
    AxesStyle -> Black, FrameLabel -> {"w", "S"}, Frame -> True,
    PlotLegends -> {"Bulk 12", "Irradiated 12"}];
fbim = Fit[SWbm, {1, x}, x];
firrim = Fit[SWim, {1, x}, x];
fam = Fit[Sort[Join[SWbm, SWim], #1[[1]] < #2[[1]] &], {1, x}, x];
Show[ListPlot[{SWbm, SWim}, PlotStyle -> {Red, Green},
    PlotRange -> {{0.004, 0.009}, {0.4, 0.47}}, PlotMarkers -> {Automatic, 10},
    LabelStyle -> Directive[Black, FontSize -> 20, FontFamily -> "Helvetica"],
    AxesStyle -> Black, FrameLabel -> {"w", "S"}, Frame -> True,
    PlotLegends -> {"Bulk 12", "Irradiated 12"}], Plot[{fbim, firrim, fam},
    {x, 0.004, 0.009}, PlotStyle -> {Red, Green, Blue}, PlotLegends ->
    {"Bulk lin fit 12", "Irradiated lin fit 12", "Joined lin fit 12"}]]
```

(Debug) Out[1283]=

